Fiche de données de sécurité
selon RÈGLEMENT (UE) 2020/878 DE LA COMMISSION

IODURE DE POTASSIUM

RUBRIQUE 1: IDENTIFICATION DE LA SUBSTANCE/DU MÉLANGE ET DE LA SOCIÉTÉ/L'ENTREPRISE

1.1 Identificateur de produit:

Iodure de potassium

CAS:	7681-11-0
EC:	231-659-4
Index:	Pas pertinent
REACH:	01-2119966161-40-XXXX

Autres moyens d'identification:

Pas pertinent

1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées:

Utilisations identifiées pertinentes (Utilisateur professionnel): Matière première pour l'industrie chimique et pharmaceutique.
Utilisations identifiées pertinentes (Utilisateur industriel): Matière première pour l'industrie chimique et pharmaceutique.
Uniquement pour usage Utilisateur professionnel/Utilisateur industriel.
Utilisations déconseillées: Toute utilisation non spécifiée dans cette section ou dans la sous-rubrique 7.3

1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité:

Mon-Droguiste.Com
39 Bis Rue Du Moulin Rouge
10150 Charmont Sous Barbuise
Tél : +33.(0)3.25.41.04.05
Email : contact@mon-droguiste.com
Web : www.mon-droguiste.com

1.4 Numéro d'appel d'urgence: +01 45 42 59 59 (ORFILA)

RUBRIQUE 2: IDENTIFICATION DES DANGERS

2.1 Classification de la substance ou du mélange:

Règlement n° 1272/2008 (CLP) :

La classification de ce produit a été réalisée conformément au Règlement n° 1272/2008 (CLP).

Eye Irrit. 2: Irritation oculaire, catégorie 2, H319
Repr. 1B: Toxique pour la reproduction, Catégorie 1B, H360
STOT RE 2: Toxicité spécifique pour certains organes cibles — Exposition répétée, catégorie de danger 2 (Oral), H373

2.2 Éléments d'étiquetage:

Règlement n° 1272/2008 (CLP) :

Danger

Indications de danger:

Eye Irrit. 2: H319 - Provoque une sévère irritation des yeux.
Repr. 1B: H360 - Peut nuire à la fertilité ou au fœtus.
STOT RE 2: H373 - Risque présumé d´effets graves pour les organes à la suite d´expositions répétées ou d´une exposition prolongée (Oral).

Conseils de prudence:

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RUBRIQUE 2: IDENTIFICATION DES DANGERS (suite)

P201: Se procurer les instructions spéciales avant utilisation.
P260: Ne pas respirer poussières
P264: Se laver soigneusement après manipulation.
P280: Porter des gants de protection/un équipement de protection du visage/des vêtements de protection/protection respiratoire/chaussures de protection.
P305+P351+P338: EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
P308+P313: EN CAS d´exposition prouvée ou suspectée: consulter un médecin.
P314: Consulter un médecin en cas de malaise.
P501: Éliminer le contenu/récipient conformément à la réglementation sur les déchets dangereux ou les emballages et déchets d´emballages.

Étiquetages supplémentaires:

Réservé aux utilisateurs professionnels

2.3 Autres dangers:

Le produit ne répond pas aux critères des substances persistantes, bioaccumulables et toxiques (PBT) / des substances très persistantes et très bioaccumulables (vPvB)
Le produit ne répond pas aux critères relatifs aux propriétés de perturbation endocrinienne.

RUBRIQUE 3: COMPOSITION/INFORMATIONS SUR LES COMPOSANTS

3.1 Substances:

Description chimique: Substance chimique

Conformément à l´Annexe II du Règlement (CE) nº1907/2006 (point 3), le produit contient:

Identification	Nom chimique /classification		Concentration
CAS: 7681-11-0 EC: 231-659-4 Index: Pas pertinent REACH: 01-2119966161-40-XXXX	**Iodure de potassium**	Auto classifiée	**100 %**
	Règlement 1272/2008	Eye Irrit. 2: H319; Repr. 1B: H360; STOT RE 2: H373 - Danger 	

Pour plus d'informations sur les dangers du produit, voir les rubriques 11, 12 et 16.

3.2 Mélanges:

Pas pertinent

RUBRIQUE 4: PREMIERS SECOURS

4.1 Description des premiers secours:

Les symptômes résultant d´une intoxication peuvent survenir après l´exposition, raison pour laquelle, en cas de doute, toute exposition directe au produit chimique ou persistance de la gêne exige des soins médicaux, en fournissant la FDS du produit concerné.

Par inhalation:

Il s´agit d´un produit ne contenant pas de substances jugées dangereuses par inhalation, toutefois, en cas de symptômes d´intoxication, retirer la personne affectée de la zone d´exposition et lui fournir de l´air frais. Demander des soins médicaux si les symptômes s´aggravent ou persistent.

Par contact cutané:

En cas de contact, il est recommandé de rincer la zone affectée à l'eau claire et de nettoyer avec du savon neutre. En cas de manifestations cutanées (démangeaison, rougeur, éruptions cutanées, ampoules,…), consultez un médecin muni de la Fiche de Données de Sécurité.

Par contact avec les yeux:

Rincer les yeux avec de l´eau en abondance à température ambiante au minimum pendant 15 minutes. Éviter que la personne affectée se frotte ou ferme les yeux. Si la personne accidentée utilise des lentilles de contact, celles-ci devront être enlevées à condition qu´elles ne soient pas collées aux yeux, auquel cas, cela pourrait provoquer des lésions supplémentaires. Dans tous les cas et après nettoyage, il faudra se rendre chez un médecin le plus rapidement possible muni de la FDS du produit.

Par ingestion/aspiration:

En cas d´ingestion, demander des soins médicaux immédiatement en fournissant la FDS du produit concerné.

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RUBRIQUE 4: PREMIERS SECOURS (suite)

4.2 Principaux symptômes et effets, aigus et différés:

Les effets aigus et à retardement sont ceux signalés dans les rubriques 2 et 11.

4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires:

Pas pertinent

RUBRIQUE 5: MESURES DE LUTTE CONTRE L'INCENDIE

5.1 Moyens d'extinction:

Moyens d'extinction appropriés:

Produit non inflammable dans des conditions normales de stockage, de manipulation et d´utilisation. En cas d´inflammation provoquée par manipulation, stockage ou usage non conforme, utiliser de préférence des extincteurs à poudre polyvalente (poudre ABC), conformément au règlement sur les installations de protection incendie.

Moyens d'extinction inappropriés:

Pas pertinent

5.2 Dangers particuliers résultant de la substance ou du mélange:

La réaction suite à la combustion ou décomposition thermique peut s'avérer très toxique et par conséquent, représenter un risque très élevé pour la santé.

5.3 Conseils aux pompiers:

En fonction de l´ampleur de l´incendie, il pourra être nécessaire de porter des vêtements de protection intégrale ainsi qu´un équipement respiratoire personnel. Disposer d´un minimum d´installations d´urgence ou d´éléments d´intervention (couvertures ignifuges, trousse à pharmacie...) selon la Directive 89/654/CE.

Dispositions supplémentaires:

Intervenir conformément au Plan d´Urgences Intérieur et aux Fiches d´information relatives aux interventions en cas d´accidents et autres urgences. Supprimer toute source d´ignition. En cas d´incendie, refroidir les containers de stockage des produits susceptibles de s´enflammer ou d´exploser en raison des températures élevées. Éviter le déversement des produits servant à éteindre l´incendie en milieu aquatique.

RUBRIQUE 6: MESURES À PRENDRE EN CAS DE DISPERSION ACCIDENTELLE

6.1 Précautions individuelles, équipement de protection et procédures d'urgence:

Pour les non-secouristes:

Balayer, récupérer à la pelle ou par d'autres moyens et conserver le produit dans des récipients adaptés et hermétiques pour une éventuelle réutilisation ou élimination.

Pour les secouristes:

Porter un équipement de sécurité. Eloigner les personnes non protégées. Voir rubrique 8.

6.2 Précautions pour la protection de l'environnement:

Produit jugé non dangereux pour l´environnement. Éviter la contamination des égouts, des eaux de surface et des eaux souterraines.

6.3 Méthodes et matériel de confinement et de nettoyage:

Nous préconisons:

Balayer, récupérer à la pelle ou par d'autres moyens et conserver le produit dans des récipients adaptés et hermétiques pour une éventuelle réutilisation ou élimination.

6.4 Référence à d´autres rubriques:

Voir les rubriques 8 et 13.

RUBRIQUE 7: MANIPULATION ET STOCKAGE

7.1 Précautions à prendre pour une manipulation sans danger:

A.- Précautions pour une manipulation en toute sécurité

Respecter la législation en vigueur en matière de prévention des risques au travail concernant la manipulation des chargements à la main. Ordonner et ranger et procéder à l´élimination moyennant des méthodes sûres (chapitre 6).

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RUBRIQUE 7: MANIPULATION ET STOCKAGE (suite)

B.- Recommandations techniques pour la prévention des incendies et des explosions.

Compte tenu de ses caractéristiques d´inflammabilité, le produit ne présente pas de risque d´incendie, dans les conditions normales de stockage, manipulation et utilisation.

C.- Recommandations techniques pour la prévention des risques ergonomiques et toxicologiques.

LES FEMMES ENCEINTES NE DOIVENT PAS ÊTRE EXPOSÉES À CE PRODUIT. Transvaser dans un lieu réunissant les conditions de sécurité requises (douches d´urgence et rince-oeil à proximité), en utilisant des équipements de protection individuelle, notamment pour le visage et les mains (Voir rubrique 8). Restreindre les transvasements manuels aux récipients pour de petites quantités. Ne pas manger, boire et fumer dans les zones de travail
se laver les mains après chaque utilisation
enlever les vêtements et l'équipement de protection contaminés avant d'entrer dans une zone de restauration

D.- Recommandations techniques pour la prévention des risques environnementaux

Il est recommandé de disposer de matériel absorbant à proximité du produit (Voir sous-rubrique 6.3)

7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités:

A.- Exigences spécifiques en matière de stockage

Stocker dans un endroit frais, sec et bien aéré

B.- Conditions générales de stockage

Éviter toutes sources de chaleur, radiation, électricité statique et tout contact avec des aliments. Pour obtenir des informations supplémentaires voir sous-rubrique 10.5

7.3 Utilisation(s) finale(s) particulière(s):

A l'exception des indications déjà spécifiées, il n'est pas nécessaire de suivre des recommandations spéciales concernant l'usage de ce produit.

RUBRIQUE 8: CONTRÔLES DE L'EXPOSITION/PROTECTION INDIVIDUELLE

8.1 Paramètres de contrôle:

Substances dont les valeurs limites d´exposition professionnelle doivent être contrôlées sur le lieu de travail:

Il n´existe pas de valeurs limites d´exposition pour les substances qui constituent le produit

DNEL (Travailleurs):

		Courte exposition		Longue exposition	
Identification		Systémique	Local	Systémique	Local
Iodure de potassium	Oral	Pas pertinent	Pas pertinent	Pas pertinent	Pas pertinent
CAS: 7681-11-0	Cutanée	Pas pertinent	Pas pertinent	0,14 mg/kg	Pas pertinent
EC: 231-659-4	Inhalation	Pas pertinent	Pas pertinent	0,07 mg/m³	Pas pertinent

DNEL (Population):

		Courte exposition		Longue exposition	
Identification		Systémique	Local	Systémique	Local
Iodure de potassium	Oral	0,01 mg/kg	Pas pertinent	0,01 mg/kg	Pas pertinent
CAS: 7681-11-0	Cutanée	Pas pertinent	Pas pertinent	0,05 mg/kg	Pas pertinent
EC: 231-659-4	Inhalation	Pas pertinent	Pas pertinent	0,035 mg/m³	Pas pertinent

PNEC:

Identification				
Iodure de potassium	STP	21,94 mg/L	Eau douce	0,597 mg/L
CAS: 7681-11-0	Sol	0,237 mg/kg	Eau de mer	0,0597 mg/L
EC: 231-659-4	Intermittent	1 mg/L	Sédiments (Eau douce)	2,94 mg/kg
	Oral	Pas pertinent	Sédiments (Eau de mer)	0,294 mg/kg

8.2 Contrôles de l'exposition:

A.- Mesures de protection individuelle, telles que les équipements de protection individuelle

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RUBRIQUE 8: CONTRÔLES DE L'EXPOSITION/PROTECTION INDIVIDUELLE (suite)

À titre de mesure préventive, il est recommandé d'utiliser les équipements de protection individuelle basiques, avec le <marquage CE> correspondant. Pour plus de renseignements sur les équipements de protection individuelle (stockage, utilisation, nettoyage, entretien, type de protection,…) consulter la brochure d'informations fournie par le fabricant de l'EPI. Les indications formulées dans ce point concernent le produit pur. Les mesures de protection concernant le produit dilué pourront varier en fonction de son degré de dilution, de son utilisation, de la méthode d'application, etc. Pour déterminer l'obligation d'installer des douches de sécurité et/ou des rince-œil de secours dans les entrepôts, respecter la règlementation concernant le stockage de produits chimiques applicable dans chaque cas. Pour plus de renseignements, se référer aux sous-rubriques 7.1 et 7.2. Toute l´information contenue ici est une recommandation qui nécessite une spécification de la part des services de prévention des risques au travail, si la société dispose de mesures supplémentaires.

B.- Protection respiratoire.

Pictogramme	PPE	Marquage	normes ECN	Observations
 Protection des voies respiratoires obligatoire	Masque auto filtrant contre les gaz, vapeurs et particules (Type de filtre: P3/FFP3)	CE CAT III	EN 149:2001+A1:2010 EN 405:2002+A1:2010 EN ISO 136:1998	À remplacer dès lors que la résistance à respirer augmente et/ou dès lors qu´une odeur ou un goût du produit contaminant est détecté.

C.- Protection spécifique pour les mains.

Pictogramme	PPE	Marquage	normes ECN	Observations
 Protection des mains obligatoire	Gants de protection chimique, non jetable	CE CAT III	EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	Le temps d´imprégnation (Breakthrough Time) indiqué par le fabricant doit être supérieur au temps d´utilisation du produit. Ne pas utiliser des crèmes protectrices après tout contact du produit avec la peau.

D.- Protection du visage et des yeux

Pictogramme	PPE	Marquage	normes ECN	Observations
 Protection du visage obligatoire	Écran facial	CE CAT II	EN 166:2002 UNE-EN ISO 18526-1 al 4:2020 UNE-EN ISO 18526-1 al 4:2020 EN ISO 4007:2018	Nettoyer quotidiennement et désinfecter régulièrement en suivant les instructions du fabricant. À utiliser s´il y a un risque d'éclaboussements.

E.- Protection du corps

Pictogramme	PPE	Marquage	normes ECN	Observations
 Protection du corps obligatoire	Vêtement de protection en cas de risques chimiques	CE CAT III	EN 13034:2005+A1:2009 UNE-EN ISO 18526-1 al 4:2020 EN ISO 13982-1:2005/A1:2011 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1995	Usage exclusif au travail.
 Protection des pieds obligatoire	Chaussures de sécurité contre risque chimique	CE CAT III	EN ISO 20345:2022 EN 13832-1:2019	Remplacer les bottes en présence de n´importe quel indice d´usure.

F.- Mesures complémentaires d'urgence

Il est recommandé de mettre en place des équipements d´urgence supplémentaires dans les lieux de travail particulièrement exposés au produit ou dans les situations où l´évaluation des risques met en évidence la nécessité d´un tel équipement.

Mesure d'urgence	normes	Mesure d'urgence	normes
 Douche d'urgence	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Rincer œil	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Contrôles d'exposition liés à la protection de l'environnement:

En vertu de la législation communautaire sur la protection environnementale, il est recommandé d´éviter tout déversement du produit mais aussi de son emballage dans l´environnement. Pour obtenir des informations supplémentaires voir sous-rubrique 7.1.D

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RUBRIQUE 8: CONTRÔLES DE L'EXPOSITION/PROTECTION INDIVIDUELLE (suite)

Composés organiques volatiles:

Conformément à l´application de la Directive 2010/75/EU, ce produit offre les caractéristiques suivantes:

C.O.V. (2010/75/UE):	0 % poids
Concentration de C.O.V. à 20 ºC:	0 kg/m³ (0 g/L)
Nombre moyen de carbone:	Pas pertinent
Poids moléculaire moyen:	Pas pertinent

RUBRIQUE 9: PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

9.1 Informations sur les propriétés physiques et chimiques essentielles:

Pour plus d'informations voir la fiche technique du produit.

Aspect physique:

État physique à 20 ºC:	Solide
Aspect:	Pulvérulent
Couleur:	☐ Blanc
Odeur:	Pas pertinent *
Seuil olfactif:	Pas pertinent *

Volatilité:

Température d'ébullition à pression atmosphérique:	1323 ºC
Pression de vapeur à 20 ºC:	Pas pertinent *
Pression de vapeur à 50 ºC:	Pas pertinent *
Taux d'évaporation à 20 ºC:	Pas pertinent *

Caractéristiques du produit:

Masse volumique à 20 ºC:	Pas pertinent *
Densité relative à 20 ºC:	3,12
Viscosité dynamique à 20 ºC:	Pas pertinent *
Viscosité cinématique à 20 ºC:	Pas pertinent *
Viscosité cinématique à 40 ºC:	Pas pertinent *
Concentration:	Pas pertinent *
pH:	8
Densité de vapeur à 20 ºC:	Pas pertinent *
Coefficient de partage n-octanol/eau à 20 ºC:	0,04
Solubilité dans l'eau à 20 ºC:	1440 kg/m³
Propriété de solubilité:	Pas pertinent *
Température de décomposition:	Pas pertinent *
Point de fusion/point de congélation:	686 ºC

Inflammabilité:

Point d'éclair:	Pas pertinent *
Inflammabilité (solide, gaz):	Pas pertinent *
Température d'auto-ignition:	Pas pertinent *
Limite d'inflammabilité inférieure:	Pas pertinent *
Limite d'inflammabilité supérieure:	Pas pertinent *

Explosivité (Solide):

Limite inférieure d´explosivité:	Pas pertinent *

*Pas pertinent en raison de la nature du produit / non déterminant pour les propriétés de danger du produit

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RUBRIQUE 9: PROPRIÉTÉS PHYSIQUES ET CHIMIQUES (suite)

Limite supérieure d´explosivité:	Pas pertinent *
Caractéristiques des particules:	
Diamètre équivalent médian:	Pas pertinent *

9.2 Autres informations:

Informations concernant les classes de danger physique:

Propriétés explosives:	Pas pertinent *
Propriétés comburantes:	Pas pertinent *
Substances ou mélanges corrosifs pour les métaux:	Pas pertinent *
Chaleur de combustion:	Pas pertinent *
Aérosols-pourcentage total suivant (en masse) de composants inflammables:	Pas pertinent *
Autres caractéristiques de sécurité:	
Tension superficielle à 20 ºC:	Pas pertinent *
Indice de réfraction:	Pas pertinent *

*Pas pertinent en raison de la nature du produit / non déterminant pour les propriétés de danger du produit

RUBRIQUE 10: STABILITÉ ET RÉACTIVITÉ

10.1 Réactivité:

Aucune réaction dangereuse attendue dans les conditions normales de stockage, manipulation et utilisation. Voir la rubrique 7 de la Fiche de Données de Sécurité.

10.2 Stabilité chimique:

Chimiquement stable dans les conditions indiquées de stockage, manipulation et utilisation.

10.3 Possibilité de réactions dangereuses:

En conditions normales, pas de réactions dangereuses susceptibles de produire une pression ou des températures excessives.

10.4 Conditions à éviter:

Applicables pour manipulation et stockage à température ambiante :

Choc et friction	Contact avec l'air	Échauffement	Lumière Solaire	Humidité
Non applicable	Non applicable	Non applicable	Non applicable	Non applicable

10.5 Matières incompatibles:

Acides	Eau	Matières comburantes	Matières combustibles	Autres
Eviter les acides forts	Non applicable	Non applicable	Non applicable	Éviter les alcalins ou les bases fortes

10.6 Produits de décomposition dangereux:

Voir sous-rubriques 10.3, 10.4 et 10.5 pour connaître précisément les produits de décomposition. En fonction des conditions de décomposition et à l´issue de cette dernière, certains mélanges complexes à base de substances chimiques peuvent se dégager: dioxyde de carbone (CO_2), monoxyde de carbone et autres composés organiques.

RUBRIQUE 11: INFORMATIONS TOXICOLOGIQUES

11.1 Informations sur les classes de danger telles que définies dans le règlement (CE) no 1272/2008:

Effets dangereux pour la santé:

En cas d'exposition répétée, prolongée ou de concentrations supérieures à celles qui sont établies par les limites d'exposition professionnelles, des effets néfastes pour la santé peuvent survenir selon le mode d'exposition :

A- Ingestion (effets aigus):

- Toxicité aiguë: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses par ingestion. Pour plus d´information, voir rubrique 3.
- Corrosivité/irritabilité: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

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RUBRIQUE 11: INFORMATIONS TOXICOLOGIQUES (suite)

B- Inhalation (effets aigus):

- Toxicité aiguë: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses par inhalation. Pour plus d´information, voir rubrique 3.
- Corrosivité/irritabilité: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

C- Contact avec la peau et les yeux (effets aigus):

- Contact avec la peau: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, et ne contiennent pas de substances jugées dangereuses au vu des effets décrits. Pour plus d´information, voir rubrique 3.
- Contact avec les yeux: Produit des lésions oculaires après un contact

D- Effets CMR (carcinogénicité, mutagénicité et toxicité pour la reproduction):

- Carcinogénicité: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses au vu des effets décrits. Pour plus d´information, voir rubrique 3.
  IARC: Pas pertinent
- Mutagénicité: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.
- Toxicité sur la reproduction: Peut nuire à la fertilité ou au fœtus

E- Effets de sensibilisation:

- Respiratoire: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses à effets sensibilisants. Pour plus d´information, voir rubrique 3.
- Cutané: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

F- Toxicité pour certains organes cibles (STOT)-temps d'exposition:

Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

G- Toxicité pour certains organes cibles (STOT)-exposition répétée:

- Toxicité pour certains organes cibles (STOT)-exposition répétée: Effets nocifs pour la santé en cas d'ingestion de façon répétée, entraînant une dépression du système nerveux central et provoquant des maux de tête, étourdissements, vertiges, nausées, vomissements, confusion, et en cas d'affection grave, une perte de connaissance.
- Peau: Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

H- Danger par aspiration:

Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

Autres informations:

Pas pertinent

Information toxicologique spécifique produit:

Toxicité sévère		Genre
DL50 orale	3118 mg/kg	Rat

Information toxicologique spécifique des substances:

Identification	Toxicité sévère		Genre
Iodure de potassium CAS: 7681-11-0 EC: 231-659-4	DL50 orale	3118 mg/kg	Rat
	DL50 cutanée	>2000 mg/kg	
	CL50 inhalation de poussières	>5 mg/L	

11.2 Informations sur les autres dangers:

Propriétés perturbant le système endocrinien

Le produit ne répond pas aux critères relatifs aux propriétés de perturbation endocrinienne.

Autres informations

Pas pertinent

RUBRIQUE 12: INFORMATION ÉCOLOGIQUE

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RUBRIQUE 12: INFORMATION ÉCOLOGIQUE (suite)

Compte tenu des données disponibles, les critères de classification ne sont pas remplis, car le produit ne contient pas de substances jugées dangereuses dans ce cadre. Pour plus de renseignements, se référer à la rubrique 3.

12.1 Toxicité:

Toxicité aquatique spécifique produit:

Toxicité sévère		Espèce	Genre
CL50	3780 mg/L (96 h)	Pas pertinent	Poisson

Toxicité aquatique spécifique des substances:

Toxicité chronique:

Identification	Concentration		Espèce	Genre
Iodure de potassium	NOEC	66,356 mg/L	N/A	Poisson
CAS: 7681-11-0 EC: 231-659-4	NOEC	29,87 mg/L	Daphnia magna	Crustacé

12.2 Persistance et dégradabilité:

Pas pertinent

12.3 Potentiel de bioaccumulation:

Pas pertinent

12.4 Mobilité dans le sol:

Pas pertinent

12.5 Résultats des évaluations PBT et VPVB:

Le produit ne répond pas aux critères des substances persistantes, bioaccumulables et toxiques (PBT) / des substances très persistantes et très bioaccumulables (vPvB)

12.6 Propriétés perturbant le système endocrinien:

Le produit ne répond pas aux critères relatifs aux propriétés de perturbation endocrinienne.

12.7 Autres effets néfastes:

Non décrits

RUBRIQUE 13: CONSIDÉRATIONS RELATIVES À L'ÉLIMINATION

13.1 Méthodes de traitement des déchets:

Code	Description	Type de déchet (Règlement (UE) n °1357/2014)
	Il n´est pas possible d´attribuer un code spécifique, étant donné que cela dépend de l´usage prévu par le destinataire	Dangereux

Type de déchets (Règlement (UE) n °1357/2014):

HP5 Toxicité spécifique pour un organe cible (STOT)/toxicité par aspiration, HP10 Toxique pour la reproduction, HP4 Irritant — irritation cutanée et lésions oculaires

Gestion du déchet (élimination et évaluation):

Consulter le responsable des déchets compétent en matière d´évaluation et élimination conformément à l´Annexe 1 et l´Annexe 2 (Directive 2008/98/CE, Décret no 2011-828, Ordonnance no 2010-1579). Conformément aux codes 15 01 (2014/955/CE), au cas où l´emballage entrerait en contact avec le produit, il faudra procéder de la même façon qu´avec le propre produit, dans le cas contraire, il faudra le traiter comme un résidu non dangereux. Il est fortement déconseillé de le verser dans des cours d´eau. Voir sous-rubrique 6.2.

Dispositions se rapportant au traitement des déchets:

Conformément à l´Annexe II du Règlement (CE) nº1907/2006 (REACH) les dispositions communautaires ou nationales se rapportant au traitement des déchets sont appliquées.
Législation communautaire: Directive 2008/98/CE, 2014/955/CE, Règlement (UE) n °1357/2014

RUBRIQUE 14: INFORMATIONS RELATIVES AU TRANSPORT

Ce produit n´est pas réglementé pour le transport (ADR/RID, IMDG, IATA)

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RUBRIQUE 15: INFORMATIONS RELATIVES À LA RÉGLEMENTATION

15.1 Réglementations/législations particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement:

- Article 95, RÈGLEMENT (UE) No 528/2012: Pas pertinent
- Règlement (UE) 2019/1021 sur les polluants organiques persistants: Pas pertinent
- Règlement (UE) 2024/590 sur les substances qui perforent la couche d´ozone : Pas pertinent
- RÈGLEMENT (UE) No 649/2012 régissant l´exportation et l´importation de produits chimiques dangereux: Pas pertinent
- Substances candidates à l´autorisation dans le Règlement (CE) 1907/2006 (REACH): Pas pertinent
- Substances inscrites à l´annexe XIV de REACH (liste d´autorisation) et date d´expiration: Pas pertinent

Seveso III:

Pas pertinent

Restrictions en matière de commercialisation et d´usage de certaines substances et mélanges dangereux (Annexe XVII REACH, etc...):

Produit jugé dangereux CMR. Sa commercialisation est interdite au public en général. Par son appartenance à la catégorie CMR, il est obligatoire d´appliquer les mesures spécifiques de prévention contre les risques au travail recueillis

Dispositions spéciales en matière de protection des personnes ou d'environnement:

Il est recommandé d'utiliser l'information recueillie sur cette fiche de données de sécurité faisant office d'information de départ pour une évaluation des risques des circonstances locales dans le but d'établir les mesures nécessaires en matière de prévention des risques pour la manipulation, l'utilisation, le stockage et l'élimination du produit.

Autres législations:

Pas pertinent

15.2 Évaluation de la sécurité chimique:

Le fournisseur a effectué l´évaluation de la sécurité chimique.

RUBRIQUE 16: AUTRES INFORMATIONS

Législation s'appliquant aux fiches de données en matière de sécurité:

Cette fiche de données en matière de sécurité a été réalisée conformément à l´ANNEXE II - Guide pour élaborer des Fiches de Données en matière de Sécurité du Règlement (CE) Nº 1907/2006 (RÈGLEMENT (UE) 2020/878 DE LA COMMISSION)

Modifications par rapport à la fiche de sécurité précédente avec répercussions sur les mesures de gestion du risque :

Pas pertinent

Textes des phrases législatives dans la rubrique 2:

H319: Provoque une sévère irritation des yeux.
H360: Peut nuire à la fertilité ou au fœtus.
H373: Risque présumé d´effets graves pour les organes à la suite d´expositions répétées ou d´une exposition prolongée (Oral).

Textes des phrases législatives dans la rubrique 3:

Les phrases inscrites ne portent pas sur le produit lui-même, elles sont seulement à titre d'information et se réfèrent aux composants individuels qui apparaissent dans la section 3

Règlement n° 1272/2008 (CLP) :

Eye Irrit. 2: H319 - Provoque une sévère irritation des yeux.
Repr. 1B: H360 - Peut nuire à la fertilité ou au fœtus.
STOT RE 2: H373 - Risque présumé d´effets graves pour les organes à la suite d´expositions répétées ou d´une exposition prolongée (Oral).

Conseils relatifs à la formation:

Une formation minimum en matière de prévention des risques au travail est recommandée pour le personnel qui va manipuler ce produit, dans le but de faciliter la compréhension et l´interprétation de cette fiche de données de sécurité au même titre que l´étiquetage du produit.

Sources de documentation principale:

http://echa.europa.eu
http://eur-lex.europa.eu

Abréviations et acronymes:

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RUBRIQUE 16: AUTRES INFORMATIONS (suite)

ADR: Accord européen relatif au transport international des marchandises dangereuses par route
IMDG: Code maritime international des marchandises dangereuses
IATA: Association internationale du transport aérien
ICAO: Organisation de l´aviation civile internationale
DCO: Demande chimique en oxygène
DBO5: Demande biologique en oxygène après 5 jours
FBC: Facteur de bioconcentration
DL50: Dose létale 50 CL50: Concentration létale 50
CE50: Concentration effective 50
Log Pow: Coefficient de partage octanol/eau
UFI: identifiant unique de formulation
IARC: Centre international de recherche sur le cancer

- FIN DE LA FICHE DE DONNÉES DE SÉCURITÉ -

ANNEX

EXPOSURE SCENARIOS POTASSIUM IODIDE

The current document includes relevant occupational and environmental exposure scenarios (ES) for the production and use of Potassium Iodide as required under the REACH Regulation (Regulation (EC) No 1907/2006). For the development of the ES the Regulation and the relevant REACH Guidance have been considered. For the description of the covered uses and processes, the "R.12–Use descriptor system" guidance (Version: 2, March 2010, ECHA-2010-G-05-EN), for the description and implementation of risk management measures (RMM) the "R.13–Risk management measures" guidance (Version: 1.1, May 2008), for the occupational exposure estimation the "R.14–Occupational exposure estimation" guidance (Version: 2, May 2010, ECHA-2010-G-09-EN) and for the actual environmental exposure assessment the "R.16–Environmental Exposure Assessment" (Version: 2, May 2010, ECHA-10-G-06-EN) was used.

1. EXPOSURE SCENARIOS FOR THE MANUFACTURE OF POTASSIUM IODIDE

1. Short title of scenario 1	
Industrial manufacturing and reprocessing of potassium iodide	
2. Description and processes covered in the exposure scenario	
Sector of use (**SU**)	**SU 8:** Manufacture of bulk, large scale chemicals (including petroleum products) **SU 9:** Manufacture of fine chemicals **SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC14, PC19, PC20, PC21**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 5**: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 1**: Manufacture of substances
3. Exposure scenario 1 : Industrial manufacture and reprocessing of potassium iodide	

3.1 Environmental contributing scenario 1	
Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)	
3.2.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation

Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)

3.3.1 Conditions of use

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative

Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)

3.4.1 Conditions of use

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.4.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69

3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)

3.5.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.05 mg/m^3** (TRA Worker)	RCR = 0.714
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.05 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.4

3.6 Worker contributing scenario 5: Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) (PROC 5)

3.6.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	

o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.6.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)

o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	

o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands (960 cm2)

3.8.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.005 mg/m^3** (TRA Worker)	RCR = 0.071
Inhalation, systemic, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.005 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.757

3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)

3.9.1 Conditions of use

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.9.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.829

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)	
3.10.1 Conditions of use	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature	Ambient (as solid)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143

Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.343 mg/m^3** (TRA Worker)	RCR = 0.343
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.486

3.11 Worker contributing scenario 10: Use as laboratory agent (PROC 15)

3.11.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative

Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes. Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light.
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**	
Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

2. EXPOSURE SCENARIOS FOR THE FORMULATION OF PREPARATIONS

1. Short title of scenario 2	
Mixing and blending of substances into (chemical) preparations in all types of formulating industries	
2. Description and processes covered in the exposure scenario	
Sector of use (**SU**)	**SU 3:** Uses of substances as such or in preparations at industrial sites **SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC 19**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 5**: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 2**: Formulation of preparations
3. Exposure scenario 1 : Formulation of preparations	

3.1 Environmental contributing scenario 1	
Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)	
3.2.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)

3.3.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative

Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)

3.4.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.4.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69

3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)

3.5.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.04 mg/m^3** (TRA Worker)	RCR = 0.571
Inhalation, systemic, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.274 mg/m^3** (TRA Worker)	RCR = 0.274
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.846

3.6 Worker contributing scenario 5: Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) (PROC 5)

3.6.1 Conditions of use(TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours

Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature	Ambient (as solid)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.6.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.06 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.06 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.68

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)

○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]

o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands (960 cm2)
3.8.2 Exposure concentrations and risks for workers	

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834

3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)	
3.9.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)
3.9.2 Exposure concentrations and risks for workers	

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.06 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.06 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.1.68

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)

3.10.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.08 mg/m^3** (TRA Worker)	Qualitative

Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.08 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.972

3.11 Worker contributing scenario 10: Use as laboratory agent (PROC 15)

3.11.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34

Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air.
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

3. EXPOSURE SCENARIOS FOR USE AT INDUSTRIAL SITES

1. Short title of scenario 3	
Mixing or blending of substances which will be physically or chemically bound into or onto a matrix (material) such as plastics additives in master batches or plastic compounds.	
2. Description and processes covered in the exposure scenario	
Sector of use (**SU**)	**SU 3:** Uses of substances as such or in preparations at industrial sites **SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC 19**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 5**: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 5**: Formulation in materials
3. Exposure scenario 1 : Formulation in materials	
3.1 Environmental contributing scenario 1	

Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)

3.2.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143

Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)

3.3.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative

Combined routes, systemic, long-term		RCR = 0.908
3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)		
3.4.1 Conditions of use (TRA Worker)		
Product characteristics		
o Physical state	Solid	
o Dustiness of material	Low	
o Concentration of substance mixture	Substance as such (100%)	
Amount used, frequency and duration of use/exposure		
o Duration of activity	< 8 hours	
Technical and organizational conditions and measures		
Other relevant operational conditions		
o General ventilation	Basic general ventilation (1-3 air changes per hour)	
o Containment	Closed system (minimal contact during routine operations)	
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]	
o Occupational Health and Safety Management System	Advanced	
Conditions and measures related to personal protection, hygiene and health evaluation		
o Dermal Protection	No [Effectiveness Dermal: 0%]	
o Respiratory Protection	No [Effectiveness Inhalation: 0%]	
Other conditions affecting workers exposure		
o Place of use	Indoors	
o Process temperature (for solid)	Ambient (default)	
o Skin surface potentially exposed	One hand face only (240 cm2)	
3.4.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69
3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)		
3.5.1 Conditions of use (TRA Worker)		
Product characteristics		
o Physical state	Solid	

o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.04 mg/m^3** (TRA Worker)	RCR = 0.571
Inhalation, systemic, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.274 mg/m^3** (TRA Worker)	RCR = 0.274
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.846

3.6 Worker contributing scenario 5: Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) (PROC 5)

3.6.1 Conditions of use(TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	

o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.6.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.06 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.06 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.68

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management	Advanced

System	
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]

Other conditions affecting workers exposure		
○ Place of use	Indoors	
○ Process temperature (for solid)	Ambient (default)	
○ Skin surface potentially exposed	Two hands (960 cm2)	
3.8.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834
3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)		
3.9.1 Conditions of use (TRA Worker)		
Product characteristics		
○ Physical state	Solid	
○ Dustiness of material	Low	
○ Concentration of substance mixture	Substance as such (100%)	
Amount used, frequency and duration of use/exposure		
○ Duration of activity	< 8 hours	
Technical and organizational conditions and measures		
Other relevant operational conditions		
○ General ventilation	Basic general ventilation (1-3 air changes per hour)	
○ Containment	Closed system (minimal contact during routine operations)	
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]	
○ Occupational Health and Safety Management System	Advanced	
Conditions and measures related to personal protection, hygiene and health evaluation		
○ Dermal Protection	No [Effectiveness Dermal: 0%]	
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]	
Other conditions affecting workers exposure		
○ Place of use	Indoors	
○ Process temperature (for solid)	Ambient (default)	
○ Skin surface potentially exposed	Two hands face (480 cm2)	
3.9.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**

Inhalation, systemic, long-term	**0.06 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.06 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.1.68

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)	
3.10.1 Conditions of use	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.08 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative

Inhalation, local, acute	**0.08 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.972

3.11 Worker contributing scenario 10: Use as laboratory agent (PROC 15)

3.11.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative

Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 Human exposure

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³

Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

1. Short title of scenario 4

Formulation [mixing] of preparations including food additives, cleaning products, offshore drilling and pharmaceutical applications

2. Description and processes covered in the exposure scenario

Sector of use (**SU**)	**SU2a:** Mining, (without offshore industries) **SU2b:** Offshore industries **SU 3:** Uses of substances as such or in preparations at industrial sites **SU 9:** Manufacture of fine chemicals **SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC19, PC20, PC21**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 5**: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 2**: Formulations of preparations

3. Exposure scenario 1 : Formulation of preparations

3.1 Environmental contributing scenario 1

Conditions of use	Not defined
Releases	Not defined
Exposure risks for the environment and man via environment:	

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)

3.2.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative

Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)

3.3.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)

3.4.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.4.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69

3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)	
3.5.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	

o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.04 mg/m^3** (TRA Worker)	RCR = 0.571
Inhalation, systemic, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.274 mg/m^3** (TRA Worker)	RCR = 0.274
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.846

3.6 Worker contributing scenario 5: Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) (PROC 5)

3.6.1 Conditions of use(TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)

o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.6.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.04 mg/m^3** (TRA Worker)	RCR = 0.571
Inhalation, systemic, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.12

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	

o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)

○ Skin surface potentially exposed	Two hands (960 cm2)	
3.8.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.02 mg/m^3** (TRA Worker)	RCR = 0.286
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.548 mg/m^3** (TRA Worker)	RCR = 0.548
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.834
3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)		
3.9.1 Conditions of use (TRA Worker)		
Product characteristics		
○ Physical state	Solid	
○ Dustiness of material	Low	
○ Concentration of substance mixture	Substance as such (100%)	
Amount used, frequency and duration of use/exposure		
○ Duration of activity	< 8 hours	
Technical and organizational conditions and measures		
Other relevant operational conditions		
○ General ventilation	Basic general ventilation (1-3 air changes per hour)	
○ Containment	Closed system (minimal contact during routine operations)	
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]	
○ Occupational Health and Safety Management System	Advanced	
Conditions and measures related to personal protection, hygiene and health evaluation		
○ Dermal Protection	No [Effectiveness Dermal: 0%]	
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]	
Other conditions affecting workers exposure		
○ Place of use	Indoors	
○ Process temperature (for solid)	Ambient (default)	
○ Skin surface potentially exposed	Two hands face (480 cm2)	
3.9.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.06 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative

Inhalation, local, long-term	**0.06 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.4 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.1.68

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)

3.10.1 Conditions of use	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.04 mg/m^3** (TRA Worker)	RCR = 0.571
Inhalation, systemic, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.8 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.137 mg/m^3** (TRA Worker)	RCR = 0.137

Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.709

3.11 Worker contributing scenario 10: Use as laboratory agent (PROC 15)	
3.11.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.

Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

1. Short title of scenario 5	
Manufacture or synthesis of fine chemicals and pharmaceuticals	
2. Description and processes covered in the exposure scenario	
Sector of use (**SU**)	**SU 3:** Uses of substances as such or in preparations at industrial sites **SU 9:** Manufacture of fine chemicals **SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC19, PC20, PC21**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 5**: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 6a:** Industrial use resulting in manufacture of another substance (use of intermediates)
3. Exposure scenario 1 : Manufacture or synthesis of fine chemicals and pharmaceuticals	
3.1 Environmental contributing scenario 1:	
Conditions of use	Not defined

Releases	Not defined

Exposure risks for the environment and man via environment:

- Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility
- Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion
- The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)

3.2.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative

Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)

3.3.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)		
3.4.1 Conditions of use (TRA Worker)		
Product characteristics		
o Physical state	Solid	
o Dustiness of material	Low	
o Concentration of substance mixture	Substance as such (100%)	
Amount used, frequency and duration of use/exposure		
o Duration of activity	< 8 hours	
Technical and organizational conditions and measures		
Other relevant operational conditions		
o General ventilation	Basic general ventilation (1-3 air changes per hour)	
o Containment	Closed system (minimal contact during routine operations)	
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]	
o Occupational Health and Safety Management System	Advanced	
Conditions and measures related to personal protection, hygiene and health evaluation		
o Dermal Protection	No [Effectiveness Dermal: 0%]	
o Respiratory Protection	No [Effectiveness Inhalation: 0%]	
Other conditions affecting workers exposure		
o Place of use	Indoors	
o Process temperature (for solid)	Ambient (default)	
o Skin surface potentially exposed	One hand face only (240 cm2)	
3.4.2 Exposure concentrations and risks for workers		
Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69
3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)		
3.5.1 Conditions of use (TRA Worker)		
Product characteristics		
o Physical state	Solid	
o Dustiness of material	Low	
o Concentration of substance mixture	Substance as such (100%)	

Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.05 mg/m^3** (TRA Worker)	RCR = 0.714
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.05 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.4

3.6 Worker contributing scenario 5: Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) (PROC 5)

3.6.1 Conditions of use(TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)

o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature	Ambient (as solid)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.6.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.857
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced

Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.251

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors

o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands (960 cm2)

3.8.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.005 mg/m^3** (TRA Worker)	RCR = 0.071
Inhalation, systemic, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.005 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.757

3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)

3.9.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.9.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143

Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.829

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)

3.10.1 Conditions of use	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative

Dermal, systemic, long-term	**0.343 mg/m^3** (TRA Worker)	RCR = 0.343
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.486

3.11 Worker contributing scenario 10: Use as laboratory agent (PROC 15)

3.11.1 Conditions of use (TRA Worker)	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	One hand face only (240 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)	
4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.	
5.1 **Human exposure**	
Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³

Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

1. Short title of scenario 6

Additive in cleaning, washing or disinfectant agents

2. Description and processes covered in the exposure scenario

Sector of use (**SU**)	**SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys) **SU 20:** Health services
Product category (**PC**)	**PC 8, PC 35**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 13**: Use as laboratory reagent
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 7:** Industrial use of sub-stances in closed systems **ERC 8a:** Wide dispersive indoor use of processing aids in open systems

3. Exposure scenario 1 : Additives in cleaning, washing or disinfectant agents

3.1 Environmental contributing scenario 1: Additives in cleaning, washing or disinfectant agents

Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)

3.2.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)	
3.3.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)	
3.4.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low

o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.4.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69

3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)

3.5.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)

o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.05 mg/m^3** (TRA Worker)	RCR = 0.714
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.05 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.4

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced

Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors

o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands (960 cm2)

3.8.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.005 mg/m^3** (TRA Worker)	RCR = 0.071
Inhalation, systemic, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.005 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.757

3.9 Worker contributing scenario 10: Use as laboratory agent (PROC 13)

3.9.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.9.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air.
4.3 Waste related measures	
○ Type of waste	Packaging materials

○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	Duration	End Point	Result (mg/L)
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is

unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

1. Short title of scenario 7

Laboratory reagent

2. Description and processes covered in the exposure scenario

Sector of use (**SU**)	**SU 9:** Manufacture of fine chemicals **SU 24:** Scientific research and development
Product category (**PC**)	**PC21**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 3**: Use in closed batch process (synthesis or formulation) **PROC 4**: Use in batch and other process (synthesis) where opportunity for exposure arises **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable

3. Exposure scenario 1 : Laboratory reagent

3.1 Environmental contributing scenario 1

Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)	
3.2.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)	
3.3.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid

○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.4 Worker contributing scenario 3: Use in closed batch process (synthesis or formulation) (PROC 3)

3.4.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	

Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.4.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.69 mg/m^3** (TRA Worker)	RCR = 0.69
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.69

3.5 Worker contributing scenario 4: Use in batch and other process (synthesis) where opportunity for exposure arises (PROC 4)

3.5.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced

Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.5.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.05 mg/m^3** (TRA Worker)	RCR = 0.714
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.05 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.4

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)

3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]

Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.8.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.005 mg/m^3** (TRA Worker)	RCR = 0.071
Inhalation, systemic, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.005 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.757

3.9 Worker contributing scenario 10: Use as laboratory agent (PROC 15)

3.9.1 Conditions of use (TRA Worker)	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	One hand face only (240 cm2)

3.9.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative

Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers	
○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**	
Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

4. EXPOSURE SCENARIOS FOR USES BY PROFESSIONAL WORKERS

1. Short title of scenario 8

Re-packing of potassium iodide

2. Description and processes covered in the exposure scenario

Sector of use (**SU**)	**SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Product category (**PC**)	**PC 19, PC 20, PC 21**
Process category (**PROC**)	**PROC 1**: Use in closed process, no likelihood of exposure **PROC 2**: Use in closed, continuous process with occasional controlled exposure **PROC 8a**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities **PROC 8b**: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities **PROC 9**: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC 14**: Production of preparations or articles by tabletting, compression, extrusion, pelletisation
Article category (**AC**)	Not applicable
Environmental release category (**ERC**)	**ERC 7:** Industrial use of substances in closed systems

3. Exposure scenario 1 : Re-packing of potassium iodide

3.1 Environmental contributing scenario 1

Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well

known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.2 Worker contributing scenario 1: Use in closed process, no likelihood of exposure (PROC 1)

3.2.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	One hand face only (240 cm2)

3.2.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.034 mg/m^3** (TRA Worker)	RCR = 0.034
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.177

3.3 Worker contributing scenario 2: Use in closed process, continuous process with occasional controlled exposure (PROC 2)	
3.3.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands face (480 cm2)

3.3.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.006 mg/m^3** (TRA Worker)	RCR = 0.086
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.006 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.822 mg/m^3** (TRA Worker)	RCR = 0.822
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.908

3.7 Worker contributing scenario 6: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a)	
3.7.1 Conditions of use (TRA Worker)	
Product characteristics	
o Physical state	Solid

o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
o General ventilation	Basic general ventilation (1-3 air changes per hour)
o Containment	Closed system (minimal contact during routine operations)
o Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
o Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
o Dermal Protection	No [Effectiveness Dermal: 0%]
o Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
o Place of use	Indoors
o Process temperature (for solid)	Ambient (default)
o Skin surface potentially exposed	Two hands (960 cm2)

3.7.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.03 mg/m^3** (TRA Worker)	RCR = 0.429
Inhalation, systemic, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.03 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.2 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.823 mg/m^3** (TRA Worker)	RCR = 0.823
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.251

3.8 Worker contributing scenario 7: Transfer of substance or preparation (charging/ discharging) from/to vessels/large containers at dedicated facilities (PROC 8b)

3.8.1 Conditions of use (TRA Worker)

Product characteristics	
o Physical state	Solid
o Dustiness of material	Low
o Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
o Duration of activity	< 8 hours

Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands (960 cm2)

3.8.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	**Exposure concentration**	**Risk characterisation**
Inhalation, systemic, long-term	**0.005 mg/m^3** (TRA Worker)	RCR = 0.071
Inhalation, systemic, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.005 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.02 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.757

3.9 Worker contributing scenario 8: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC 9)

3.9.1 Conditions of use (TRA Worker)

Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]

○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.9.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.686 mg/m^3** (TRA Worker)	RCR = 0.686
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.829

3.10 Worker contributing scenario 9: Production of preparations or articles by tabletting, compression, extrusion pelletisation (PROC 14)

3.10.1 Conditions of use	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	
Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]

○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	Two hands face (480 cm2)

3.10.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.01 mg/m^3** (TRA Worker)	RCR = 0.143
Inhalation, systemic, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.01 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.04 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.343 mg/m^3** (TRA Worker)	RCR = 0.343
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 0.486

4. Risk Management Measures (RMM)

4.1 RMMs related to workers

○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light

4.2 RMMs related to the environment

○ Organisational measures	Procedural and/or control technologies are required to minimize emissions

	and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 **Human exposure**

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 **Environmental exposure**

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	**Duration**	**End Point**	**Result (mg/L)**
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207
Daphnid	48-hr	LC50	2844.798
Green Algae	96-hr	EC50	577.397
Fish	30-day	CHV	615.632
Daphnid	-	CHV	241.908
Green Algae	-	CHV	159.232
Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739

Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

1. Short title of scenario 9

Uses as laboratory reagent

2. Description and processes covered in the exposure scenario

Sector of use (**SU**)	**SU 24:** Scientific research and development
Product category (**PC**)	Not relevant
Process category (**PROC**)	**PROC 15**: Use as laboratory reagent
Article category (**AC**)	Not applicable

3. Exposure scenario 1 : Uses as laboratory agent

3.1 Environmental contributing scenario 1

Conditions of use	Not defined
Releases	Not defined

Exposure risks for the environment and man via environment:

Potassium iodide is very stable under ordinary conditions of use and storage. The phototransformation in air is irrelevant to potassium iodide, because few potassium iodide can be distributed in air for the low vapour pressure and high water solubility

Hydrolysis is not a concern to such inorganic substance which can be completely ionized in water phase. Potassium iodide will completely dissociate in water giving potassium ion and iodide anion

The potassium iodide is readily absorbed by organisms as K+ and I-, which are both small (an)ions and well known not likely to be bioaccumulated

Based on the intrinsic prosperities of potassium iodide, the substance can be expected to have a low potential for adsorption (completely ionized to small ions in water phase). The potassium ion and iodide anion are uniformly distributed in water phase. In the air, these two basic (an)ions is negligible, due to high water solubility and low vapour pressure. To sediment and soil phases, these two (an)ions are mostly distributed in the pore water.

3.9 Worker contributing scenario 1: Use as laboratory agent (PROC 15)

3.9.1 Conditions of use (TRA Worker)	
Product characteristics	
○ Physical state	Solid
○ Dustiness of material	Low
○ Concentration of substance mixture	Substance as such (100%)
Amount used, frequency and duration of use/exposure	
○ Duration of activity	< 8 hours
Technical and organizational conditions and measures	

Other relevant operational conditions	
○ General ventilation	Basic general ventilation (1-3 air changes per hour)
○ Containment	Closed system (minimal contact during routine operations)
○ Local exhaust ventilation	No [Effectiveness Inhalation: 0%]
○ Occupational Health and Safety Management System	Advanced
Conditions and measures related to personal protection, hygiene and health evaluation	
○ Dermal Protection	No [Effectiveness Dermal: 0%]
○ Respiratory Protection	No [Effectiveness Inhalation: 0%]
Other conditions affecting workers exposure	
○ Place of use	Indoors
○ Process temperature (for solid)	Ambient (default)
○ Skin surface potentially exposed	One hand face only (240 cm2)

3.9.2 Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	**0.07 mg/m^3** (TRA Worker)	RCR = 1
Inhalation, systemic, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, long-term	**0.07 mg/m^3** (TRA Worker)	Qualitative
Inhalation, local, acute	**0.28 mg/m^3** (TRA Worker)	Qualitative
Dermal, systemic, long-term	**0.34 mg/m^3** (TRA Worker)	RCR = 0.34
Dermal, systemic, acute		Qualitative
Combined routes, systemic, long-term		RCR = 1.34

4. Risk Management Measures (RMM)

4.1 RMMs related to workers

○ Organisational measures	Workers in the identified process/areas should be trained (a) to avoid work without protection and (b) to understand the respiratory effects of potassium iodide and (c) to follow the safer procedures instructed by the employer General occupational hygiene measures are required to ensure safe handling of the substance. Good occupational hygiene practices have to be followed (e.g. shower and change clothes at end of work shift) to avoid any contamination of private households via the work-home-interface. Avoid inhalation or ingestion. Do not eat and smoke in the workplace. Unless otherwise stated below, wear standard working clothes and shoes. Do not wear contaminated clothing at home. Do not blow dust off with compressed air. Regular training in workplace hygiene practice and proper use of personal

	protective equipment is required.
○ Technical measures	Use closed systems and covering open containers to avoid potential splashes Store in cool, dry clean, well ventilated areas, away from oxidizer materials. Do not store under direct sun light
4.2 RMMs related to the environment	
○ Organisational measures	Procedural and/or control technologies are required to minimize emissions and the resulting exposure during cleaning and maintenance procedures.
○ Abatement measures related with wastewater	Potassium iodide wastewater should be reused or iodine in them recovered.
○ Abatement measures waste air and solid waste	Due to is negligible vapour pressure potassium iodide is not expected to be found in the solid waste nor to reach the air
4.3 Waste related measures	
○ Type of waste	Packaging materials
○ Disposal technique	The containers and packaging materials should be disposed in accordance with local requirements.

5. Prediction of exposure resulting from the conditions described above and the substance properties.

5.1 Human exposure

Inhalation Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.035 mg/m³
Inhalation Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Long-term	Risque inconnu (aucune autre information nécéssaire).
Inhalation Local effects - Acute	Aucun risque identifié.
Oral Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Oral Systemic effects - Acute	DNEL (Dose dérivée sans effet): 0.01 mg/kg bw/day
Dermal Systemic effects - Long-term	DNEL (Dose dérivée sans effet): 1 mg/kg bw/day
Dermal Systemic effects - Acute	Risque inconnu (aucune autre information nécéssaire).
Dermal Local effects - Long-term	Aucun risque identifié.
Dermal Local effects - Acute	Aucun risque identifié.
Eyes Local effects	Aucun risque identifié.

5.2 Environmental exposure

5.2.1 Aquatic compartment (including sediment) – ECOSAR v.1.00 program operated by EPA

Organism	Duration	End Point	Result (mg/L)
Fish	96-hr	LC50	6736.780
Fish	14-day	LC50	6600.207

Daphnid	48-hr	LC50	2844.798
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Daphnid	-	CHV	241.908
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Fish ((SW)	-	CHV	10867.097
Mysid Shrimp	96-hr	LC50	27123.457
Fish ((SW)	-	CHV	318.739
Mysid Shrimp (SW)	-	CHV	4186.333
Earthworm	14-day	LC50	460.463

5.2.2 Terrestrial compartment

The direct release to soil can be excluded for the exposure scenario. For indirect exposure to soil, firstly the low vapour pressure and high water solubility can prove that little iodide will distribute in air, which means no potassium iodide will be deposited from air.

Secondly, the adsorption to sludge can be excluded due to high water solubility and low adsorption potential; thus the indirect exposure to soil on sludge application can be ruled out. In conclusion, the exposure to soil is unlikely.

6. PBT and vPvB assessment

PBT assessment does not apply.

According to REACH regulation 1907/2006 Annex XIII PBT/vPvB assessment does not apply for inorganic substances.

Rev 14/10/16 changes :

Scenario 7 ERC 8b removed because it's not relevant for a use as laboratory reactant

Scenario 9 ERC 4 removed for the same reason