Shell Chemicals

Technical Datasheet

ShellSol D70

Product Code	Q7712
Region	Europe
Product Category	Aliphatic Mineral Spirits
CAS Registry Number	64742-47-8
EINECS Number	265-149-8
Description	ShellSol D70 consists predominantly of C11- C14 paraffins and naphthenes. Deep hydrogenation gives this solvent a very low aromatic content, negligible amount of reactive impurities and a low, sweet odour.

Typical Properties

Property	Unit	Method	Value
Water	% m/m	ASTM D1364	< 0.005
Density @15°C	kg/L	ASTM D4052	0.796
Coefficient of Cubic Expansion @20°C	10^{-4}/°C	Calculated	9
Refractive Index @20°C	-	ASTM D1218	1.439
Colour	Saybolt	ASTM D156	+30
Bromine Index	mg Br/100g	ASTM D1492	< 10
Copper Corrosion (1hr @100°C)	-	ASTM D130	1
Doctor Test	-	ASTM D4952	Negative
Non Volatile Matter	mg/100ml	ASTM D1353	1
Distillation, Initial Boiling Point	°C	ASTM D86	203
Distillation, Dry Point	°C	ASTM D86	237
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	0.01
Relative Evaporation Rate (Ether=1)	-	DIN 53170	800
Antoine Constant A #	kPa, °C	-	5.99080
Antoine Constant B #	kPa, °C	-	1753.00
Antoine Constant C #	kPa, °C	-	221.030

Antoine Constants: Temperature range	°C	-	+80 to +215
Vapor Pressure @ 0°C	kPa	Calculated	0.01
Vapor Pressure @ 20°C	kPa	Calculated	0.05
Saturated Vapor Concentration @ 20°C	g/m^3	Calculated	4
Paraffins	% m/m	GC	50
Naphthenes	% m/m	GC	50
Aromatics	mg/kg	SMS 2728	< 200
Benzene	mg/kg	GC	< 3
Sulfur	mg/kg	ISO 20846	< 0.5
Flash Point	°C	ASTM D93	78
Lower Explosion Limit in Air	% v/v		0.6
Upper Explosion Limit in Air	% v/v		5.5
Auto Ignition Temperature	°C	ASTM E659	236
Electrical Conductivity @ 20°C	pS/m	ASTM D4308	< 1
Dielectric Constant @ 20°C	-	-	2.1
Aniline Point	°C	ASTM D611	76
Kauri-Butanol Value	-	ASTM D1133	29
Pour Point	°C	ASTM D97	< -50
Viscosity @ 25°C	mm^2/s	ASTM D445	2.0
Surface Tension @ 20°C	mN/m	Du Nouy ring	26
Thermal Conductivity @ 20°C	W/m/°C		0.14
Hildebrand Solubility Parameter	$(cal/cm^3)^{1/2}$	-	7.6
Hydrogen Bonding Index	-	-	0
Fractional Polarity	-	-	0
Heat of Vaporization at T_{boil}	kJ/kg	-	250
Heat of Combustion (Net) @t 25°C	kJ/kg	-	45000
Specific Heat @ 20°C	kJ/kg/°C	-	2.0
Molecular Weight	g/mol	Calculated	174

(#) In the Antoine temperature range, the vapor pressure P (kPa) at temperature T (°C) can be calculated by means of the Antoine equation: log P = A - B/(T+C)

Test Methods

Copies of copyrighted test methods can be obtained from the issuing organisations:

American Society for Testing and Materials (ASTM) : www.astm.org
International Organization for Standardization (ISO) : www.iso.org
Deutsches Institut für Normung (DIN) : www.din.de

Shell Method Series (SMS) methods are issued by Shell Global Solutions International B.V., Shell Technology Centre, Amsterdam, The Netherlands. Requests for copies of SMS can be made through your local Shell Chemicals company.

N.B: For routine quality control local test methods may be applied. Such methods have been validated against those mentioned in this datasheet.

Quality

ShellSol D70 does not contain detectable quantities of polycyclic aromatics, heavy metals or chlorinated compounds.

Hazard Information

For detailed Hazard Information please refer to the Safety Data Sheet on ww.shell.com/chemicals.

Storage Handling

Provided proper storage and handling precautions are taken we would expect ShellSol D70 to be technically stable for at least 12 months. For detailed advice on Storage and Handling please refer to the Safety Data Sheet on www.shell.com/chemicals.

Trademark

ShellSol is a Shell trademark.