



Data Sheet

Issued:

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Product Name

SHELLSOL D70

Product Code
Q7712 Europe
Product Category
Aliphatics
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
Color	Saybolt	ASTM D156	+30
Density @15°C	kg/L	ASTM D4052	0.787
Cubic Expansion Coefficient @20°C	(10 ⁻⁴)/°C	Calculated	9
Refractive Index @20°C	-	ASTM D1218	1.435
Bromine Index	mg Br/100g	ASTM D1492	10
Copper Corrosion (3hr @100°C)	-	ASTM D130	1
Doctor Test	-	ASTM D4952	Negative
Non Volatile Matter	mg/100mL	ASTM D1353	1
Distillation, IBP	°C	ASTM D86	198
Distillation, EP	°C	ASTM D86	244
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	-	+40 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	55
Naphthenes	% m/m	GC	45
Aromatics	mg/kg	SMS 2728	< 100
Benzene	mg/kg	GC	< 5
Sulfur	mg/kg	SMS 1897	< 0.5
Water	% m/m	ASTM D1364	< 0.005
Flash Point	°C	ASTM D93	73
Auto Ignition Temperature	°C	ASTM E659	236
Explosion Limit: Lower	%v/v	-	0.6
Explosion Limit: Upper	%v/v	-	5.5
Aniline Point (M=Mixed)	°C	ASTM D611	77
Kauri-Butanol Value	-	ASTM D1133	30
Hildebrand Solubility Parameter	(cal/cm ³) ^{1/2}	-	7.6
Hydrogen Bonding Index	-	-	0
Fractional Polarity	-	-	0
Pour Point	°C	ASTM D97	< -50
Surface Tension @20°C	mN/m	ASTM D971	26
Viscosity @25°C	mm ² /s	ASTM D445	1.97
Dielectric Constant @20°C	-	-	2.15
Electrical Conductivity @20°C	pS/m	ASTM D4308	< 1
Heat of Combustion (Net) @25°C	kJ/kg	-	45000
Heat of Vaporization @Tboil	kJ/kg	-	350
Specific Heat @20°C	kJ/kg/°C	-	1.9
Thermal Conductivity @20°C	W/m/°C	-	0.14
Molecular Weight	g/mol	-	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
Energy Institute (IP) : www.energyinst.org.uk
Deutsches Institut für Normung (DIN) : www.din.de

Shell Method Series (SMS) methods are issued by Shell International Chemicals B.V., Shell Research and Technology Centre, Amsterdam, The Netherlands. Copies of SMS can be obtained through your local Shell Chemicals company.

For routine quality control analyses, local test methods may be applied that are different from those mentioned in this datasheet. Such methods have been validated and can be obtained through your local Shell Chemicals company.

Quality

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

Applications	<p>SHELLSOL D70 is used in many applications where inertness, low aromatics content and low odour is of value, e.g. architectural and other surface coatings, wood preservatives, metal degreasing photocopier fluids, carbonless copy papers, food processing, household applications (e.g. lamp oil, barbecue lighter fluid, waxes and polishes), cosmetics, metal working fluids, solvent extraction of metals, crop protection formulations, drilling muds and dry cleaning.</p>
Hazard Information	<p>For detailed Hazard Information please refer to the Material Safety Data Sheet on www.shell.com/chemicals.</p>
Storage and Handling	<p>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 Material Safety Data Sheet on www.shell.com/chemicals.</p>
Warranty	<p>All products purchased or supplied by Shell are subject to terms and conditions set out in the contract, order acknowledgment and/or bill of lading. Shell warrants that its product will meet those specifications designated as such herein or in other publications. All other information including that herein, supplied by Shell is considered accurate but is furnished upon the express condition that the customer shall make its own assessment to determine the products suitability for a particular purpose. Shell makes no other warranty either expressed or implied, regarding such other information, the data upon which the same is based, or the results to be obtained from use thereof; that any products shall be merchantable or fit for any purpose; or that the use of such other information or product will not infringe any patent.</p> <p>The expression 'Shell Chemicals' refers to the companies of the Royal Dutch/Shell Group which are engaged in chemical businesses. Each of the companies which make up the Royal Dutch/Shell Group of companies is an independent entity and has its own separate identity.</p>
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