Shell Chemicals

Data Sheet

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Product Name

Heptane

Product Code **Q1352** **Europe**

Product Category **Special Boiling Point Solvents**

CAS Registry Number 64742-49-0

EINECS Number 265-151-9

Description Heptane is a narrow boiling range C7 hydrocarbon solvent, low in n-hexane. Being made from hydrogenated feedstock, its aromatics and olefins content is very low.

Typical Properties

Property	Unit	Method	Value
Density @15°C	kg/l	ASTM D4052	0.711
Cubic Expansion Coefficient @20°C	(10^-4)/°C	Calculated	13
Refractive Index @20°C	-	ASTM D1218	1.397
Color	Saybolt	ASTM D156	+30
Bromine Index	mg Br/100g	ASTM D1492	< 5
Copper Corrosion (3hr @100°C)	-	ASTM D130	1
Doctor Test	-	ASTM D235	Negative
Non Volatile Matter	mg/100ml	ASTM D1353	< 1
Distillation, IBP	°C	ASTM D1078	95
Distillation, DP	°C	ASTM D1078	99
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	3.9
Relative Evaporation Rate (Ether=1)	-	DIN 53170	3.0
Antoine Constant A #	kPa, °C	-	7.72070
Antoine Constant B #	kPa, °C	-	2545.47
Antoine Constant C #	kPa, °C	-	349.430
Antoine Constants: Temperature range	°C	-	+30 to +90
Vapor Pressure @0°C	kPa	Calculated	2.7
Vapor Pressure @20°C	kPa	Calculated	6.8
Saturated Vapor Concentration @20°C	g/m³	Calculated	275
Paraffins	% m/m	GC	70
Naphthenes	% m/m	-	30
Aromatics	mg/kg	SMS 2728	< 5
Benzene	mg/kg	GC	< 3

n-Hexane	% m/m	GC	< 0.1
Sulfur	mg/kg	SMS 1897	< 0.5
Flash Point	°C	IP 170	-7
Auto Ignition Temperature	°C	ASTM E659	215
Explosion Limit: Lower	%v/v	-	1.0
Explosion Limit: Upper	%v/v	-	7.0
Electrical Conductivity @20°C	pS/m	-	< 1
Dielectric Constant @20°C	-	-	1.9
Aniline Point	°C	ASTM D611	61
Kauri-Butanol Value	-	ASTM D1133	32
Pour Point	°C	ASTM D97	< -50
Surface Tension @20°C	mN/m	Du Nouy ring	21
Viscosity @25°C	mm^2/s	ASTM D445	0.64
Hildebrand Solubility Parameter	$(cal/cm^3)^{\wedge}½$	-	7.5
Hydrogen Bonding Index	-	-	0
Fractional Polarity	-	-	0
Heat of Vaporization @Tboil	kJ/kg	-	315
Heat of Combustion (Net) @25°C	kJ/kg	-	45500
Specific Heat @20°C	kJ/kg/°C	-	2.1
Thermal Conductivity @20°C	W/m/°C	-	0.12
Molecular Weight	g/mol	Calculated	99

(#) 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 Golabl Solutions International 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

Heptane does not contain detectable quantities of polycyclic aromatics, heavy metals or chlorinated compounds

Hazard Information

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

Storage and Handling

Provided proper storage and handling precautions are taken we would expect Heptane 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.

Warranty

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