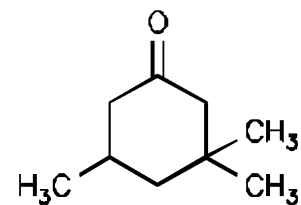


VESTASOL[®] TMC-on

3,3,5-Trimethylcyclohexan-1-on (TMC-on)



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General description

VESTASOL[®] TMC-on is a saturated cyclic ketone. It is a colorless high-boiling liquid with high purity, low viscosity and an aromatic odor reminiscent of menthol.

Specification

Property	Value	Unit	Test method
Appearance	clear		visual
Color (Hazen)	≤ 15	mg Pt/l	DIN ISO 6271/ ASTM D 1209
Purity	≥ 98.5	% by weight	Gas chromatography
Water content	≤ 0.2	% by weight	DIN 51 777 / ISO 760
Isophorone content	≤ 0.2	% by weight	Gas chromatography
Trimethylcyclohexanol content	≤ 1.5	% by weight	Gas chromatography
Acid number	≤ 0.1	mg KOH/g	DIN EN ISO 2114
Typical Data (not specified)			
Molecular weight (C ₉ H ₁₆ O)	140.1	g/mol	–
Solidification point	approx. – 10	°C	DIN ISO 3016
Viscosity at 20°C	approx. 2.5	mPa s	DIN 53 015
Solubility parameter at 25°C	15.9	(J/cm ³) ^{1/2}	–
Heat of evaporation at b.p.	35.5	kJ/mol	–
Vapor pressure at 50°C	8	hPa	–
Evaporation number (diethyl ether = 1)	approx. 109		DIN 53 170
Flash point	approx. 64	°C	DIN EN ISO 2719
Refractive index at n _D 20/D	approx. 1.445		DIN 51 423
Density at 20°C	approx. 0.88	g/ml	DIN 51 757 / ASTM D 2111
Boiling point at 1013 hPa	188.8	°C	DIN 53 171

Properties and Applications

VESTASOL[®] TMC-on is a high-boiling liquid which has only limited miscibility with water, but is infinitely miscible with the usual organic chemicals. It is closely related to Isophorone. There are slight variations in boiling range and solubility behavior.

TMC-on is an interesting starting material for various chemical syntheses. Direct oxidation or combination with suitable materials gives peroxides, which are used as catalysts for the polymerization of unsaturated compounds having a long pot life.

TMC-on-oxime has anti-skinning properties in siccative-containing paints and coatings.

Polymers, polyamides, polyesters and polyurethanes can be synthesized via various intermediates. Finally, reductive amination gives a substituted cyclic monoamine (3,3,5 -Trimethylcyclohexylamine), which, in free or bound form, is used as an anticorrosion agent or for other chemical syntheses.

Transport and Packaging

VESTASOL[®] TMC-on is supplied in 180 kg non-returnable steel drums.

For NAFTA: VESTASOL[®] TMC-on is supplied in 397 pound non-returnable steel drums, as well as in iso containers.

Storage

TMC-on can be stored in steel containers. Storage times up to 1 year in closed original containers are possible without influence to the product.

Storage temperature should not exceed 30 °C.

Safety and Handling

Please refer to our Safety Data Sheet.

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