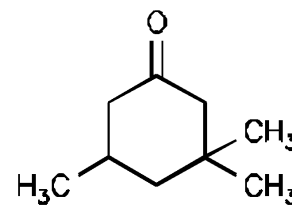


VESTASOL[®] TMC-on

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



43.13.053ew / 05.14

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.

Evonik Resource Efficiency GmbH	Evonik Corporation	Evonik Speciality Chemicals Co., Ltd.
Paul-Baumann-Str. 1	Reource Efficiency	55, Chundong Road
45764 Marl	299 Jefferson Road	Xinzhuang Industry Park
Germany	Parsippany, NJ 07054-0677, USA	Shanghai, 201108, PR China
PHONE +49 2365 49-02	PHONE +1 973 929-8000	PHONE +86 21 6119-1000
FAX +49 2365 49-5030	FAX +1 973 929-8460	FAX +86 21 6119-1168
www.evonik.com/crosslinkers	www.evonik.com/crosslinkers	www.evonik.cn/crosslinkers
www.evonik.com/coatings	www.evonik.com/coatings	www.evonik.com/coatings
E-MAIL vesta@evonik.com	E-MAIL vesta@evonik.com	E-MAIL vesta@evonik.com

Replaces leaflet 43.13.053e / 10.03 and all former issues
Marl, June 1, 2014

VESTASOL[®] = is a registered trademark of Evonik Industries AG or one of its subsidiaries

This information and all further technical advice are based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used