



Products & Applications

VESTASOL[®]
Specialty Solvents &
Intermediates

vesta**is**sol

VESTASOL® is the new brand name for specialty solvents from Evonik.

Henceforth, the following solvents will be marketed under the new brand name:
isophorone (IP), trimethylcyclohexanone (TMC-one), tetrahydronaphtalene (THN) and decahydronaphtalene (DHN).

VESTASOL® joins the VESTA brand family comprised of VESTAMIN®, VESTANAT® and VESTAGON®.



VESTASOL® - for a wide variety of solvent and intermediate applications.

Overcoming special coating and ink challenges often requires a careful selection of solvents. Whether in the paint and coatings industry, in manufacturing, in cleaning or degreasing surfaces, or in the formulation of crop protection agents, the properties and use of the solvent significantly influences the performance of the end product.

Due to their unique chemical structures, VESTASOL® products are used as raw materials for various chemical syntheses.



Product Information

Specification	VESTASOL® IP	VESTASOL® TMC -one	VESTASOL® THN
Appearance	Clear	Clear	Clear
Color number (Hazen)	≤ 50	≤ 15	≤ 20
Purity	≥ 99,0	≥ 98.5	≥ 98.0
Water content	≤ 0.1	≤ 0.2	
Acid content (calculated as acetic acid)	≤ 0.01		
Acid number		≤ 0.1	
Isophorone		≤ 0.2	
Trimethylcyclohexanole		≤ 1.5	
Decahydronaphthalene			≤ 1.5
Naphthalene			≤ 0.7

Typical properties

Empirical formula	C ₉ H ₁₄ O	C ₉ H ₁₆ O	C ₁₀ H ₁₂
Molecular weight	138.2	140.0	132.2
Solidification point	approx. -8	approx. -10	approx. -31
Viscosity at 20 °C	approx. 2.6	approx. 2.5	approx. 2.2
Solubility parameter at 25 °C	17.9	15.9	19.5
Heat of evaporation at boiling point	approx. 42.4	35.5	42.3
Vapor pressure at 20°C	0.4	-	0.24
Vapor pressure at 50°C	-	8	-
Evaporation number	approx. 330	approx. 109	approx. 200
Boiling range at 1013 hPa	210 - 216	approx. 189	200 - 209
Flash point	approx. 85	approx. 64	71 - 77
Refractive index n _D ²⁵	approx. 1.476	-	approx. 1.539
Refractive index n _D ²⁰		approx. 1.445	-
Density at 20°C	0.918 - 0.923	approx. 0.88	0.965 - 0.971

VESTASOL® IP (Isophorone)

Applications

- Coatings
- Inks
- Crop protection
- Chemical syntheses

Properties

- High boiling
- Improves levelling
- Increases gloss
- Universal solvency

A marvelous raw material

VESTASOL® IP is a starting material for many commercial products used in the agrochemical and disinfectant markets.

Exciting gloss

Brilliant colors cause a sensation. The universal solvency of VESTASOL® IP provides for remarkable gloss in coatings and inks.

To make your crops flourish

VESTASOL® IP plays a remarkable role as a solvent in the agrochemical industry. Its special properties allow formulations that permit a very fine and optimum distribution of the herbicide or pesticide, thereby increasing the effectivity of the active agent.

VESTASOL® TMC -one (Trimethylcyclohexanone)

Applications

- Coatings
- Raw material for chemical syntheses
- Plastics (e.g., polycarbonate)

Properties

- Improves levelling
- Increases gloss
- Improves surfaces
- Universal solvency

A wonderful synthesis

VESTASOL® TMC -one is a raw material for a number of chemical syntheses for products used in the plastic and cosmetic industries.

Brilliant finish

Surface defects are greatly reduced with VESTASOL® TMC -one. It is a solvent that improves the levelling properties and gloss of coating.

VESTASOL® DHN		Unit	Measuring method
Clear			Visual
≤ 10		mg Pt/l	DIN EN ISO 6271 / ASTM D 1209
≥ 98.0		wt. %	Gas chromatography
≤ 0.1		wt. %	DIN 51 777 / ISO 760
≤ 0.01		wt. %	ASTM D 1613
		mg KOH/g	DIN EN ISO 2114
		wt. %	Gas chromatography
		wt. %	Gas chromatography
		wt. %	Gas chromatography
		wt. %	Gas chromatography
C ₁₀ H ₁₈			
138.3		g/mol	
cis isomer	trans isomer		
approx. -43	approx. -30	°C	DIN ISO 3016
approx. 3.4	approx. 2.1	mPa s	DIN 53 015
17.6	17.0	(J/cm ³) ^{1/2}	
39.8	38.6	kJ/mol	
-	-	hPa	
1	4	hPa	
approx. 100	approx. 100		DIN 53 170
	185 -195	°C	DIN 53 171
approx. 61	approx. 54	°C	DIN EN ISO 2719
	approx. 1.472		DIN 51 423
	-		DIN 51 423
	0.870 - 0.895	g/ml	DIN 51 757 / ASTM D 2111

VESTASOL® THN (Tetrahydronaphthalene)

Applications

- Coatings
- Greases, oils, waxes, bitumen
- Floor waxes, shoe polishes
- Heat transfer liquid
- Chemical syntheses in pharmaceutical and agrochemical industries

Properties

- High boiling
- Improves gloss
- Improves levelling
- Autoxidative

For a brilliant appearance and extraordinary adhesion

It dissolves greases, oils, rubber and asphalt, is autoxidative, and works as an oxygen carrier in air-drying oils.

Partnership for a colorful future

The properties of the solvent have to be right if you want high gloss and smooth paint surfaces: Good solvency, improvement of interlayer adhesion: VESTASOL® THN works where you need it.

VESTASOL® DHN (Decahydronaphthalene)

Applications

- Coatings
- Greases, resins
- Floor waxes, shoe polishes
- Plastics processing
- Printing industry

Properties

- High boiling
- Improves gloss
- Improves levelling
- Inert

Knowledge for practical solutions

VESTASOL® DHN imparts good flow and high gloss to inks and coatings. It is suitable as a solvent for rinsing flexographic printing plates.

A special aid

VESTASOL® DHN is an indispensable component in the processing of special plastics.

Evonik Degussa Corporation

Coatings & Additives
379 Interpace Parkway
Parsippany, NJ 07054-0677
USA

PHONE +1 973 541-8462

FAX +1 973 541-8460

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EVONIK
INDUSTRIES

Evonik Degussa GmbH

Coatings & Additives
Paul-Baumann-Straße 1
45764 Marl
Germany

PHONE +49 2365 49-02

FAX +49 2365 49-5030

vesta@evonik.com

www.evonik.com/crosslinkers

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