

Printing & Packaging

Industrial Coatings

Technical Data Sheet

Laromer[®] TMPTA



Product Description

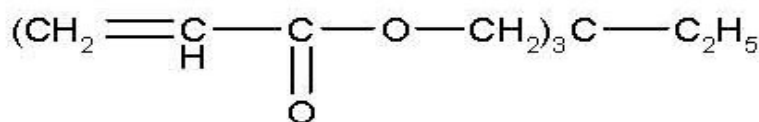
Laromer[®] TMPTA is an acrylic acid ester that is used as a reactive monomer in energy curable coatings, inks, and overprint varnishes. It contains three polymerizable acrylate groups per molecule, which enables it to form copolymers.

Key Features & Benefits

- Good adhesion
- Good film hardness
- Faster cure

Chemical Structure

Trimethylolpropane triacrylate



Properties

Typical Properties

liquid	Appearance	clear
	Odor	ester - like
	Assay (gas chromatography)	≥ 80%
	Acidity, as acrylic acid (DIN EN ISO 2114, method B)	≤ 0.05%
	Water content (K. Fischer, DIN 541777)	≤ 0.05%
	Hazen/APHA color number (DIN ISO 6271)	≤ 100
	Density at 25°C (DIN 51757, method 4.3)	1.102 g/cm ³
	Boiling point (DIN EN ISO 3405)	126°C
	Specific heat capacity at 30°C	1.7 kJ/(kg K)
	Solidification point (ISO DIS 3841)	- 22°C
	Refracting index <i>n</i> _D at 20°C (DIN EN ISO 489)	1.475
	Standard stabilization	150 – 250 ppm MEHQ ¹

Solubility

of Laromer [®] TMPTA in water at 25°C	5.0 g/l
of water in Laromer [®] TMPTA	emulsion formed

Solubility, diluent tolerance

Can be mixed with most organic solvents.

¹Monomethyl ether of hydroquinone

These typical values should not be interpreted as specifications.

Applications

Laromer[®] TMPTA contains three polymerizable acrylate groups per molecule, which enables it to form copolymers of, for example, acrylic or methacrylic acids and their salts, amides, esters, vinyl acetate, and styrene. Readily entering into addition reactions, Laromer[®] TMPTA is also an important feedstock for chemical synthesis. The polymerizable groups allow the product to be used as a crosslinking component in energy curable inks or coatings, where it also acts as a reactive diluent. During curing, Laromer[®] TMPTA becomes part of the polymer structure.

Laromer® TMPTA is also recommended for use in energy curable flexo, screen, and offset inks and overprint varnishes. Cured inks or overprint varnishes provide good resistance properties and hardness.

Laromer® TMPTA is recommended for applications such as:

- Pigment dispersions
- Printing inks for flexographic, gravure, lithographic, digital, or silk-screen applications
- Overprint varnishes for commercial or publication applications
- Interior/exterior general industrial metal coating applications
- Interior/exterior machine or equipment metal coating applications
- Interior/exterior wood coatings for floor, furniture, or millwork applications

Processing

The product can be polymerized by the usual block, solution, suspension, and emulsion techniques. Removal of the stabilizer beforehand is generally not necessary. An excess of initiator can counteract its effect if needed.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Laromer® TMPTA.

Important

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