

# Printing & Packaging Industrial Coatings

Technical Data Sheet

## Laromer<sup>®</sup> TPGDA



### Product Description

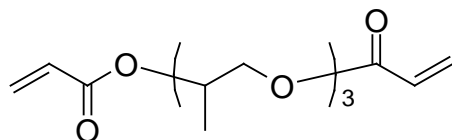
Laromer<sup>®</sup> TPGDA is an acrylic acid ester that is used as a reactive monomer in energy curable coatings, inks, and overprint varnishes. It contains two polymerizable acrylate groups per molecule, which enables it to form copolymers.

### Key Features & Benefits

- Good adhesion
- Good reactivity
- Good pigment dispersion stability

### Chemical Structure

Tripropyleneglycol diacrylate



## 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 51777)	≤ 0.05%
Hazen/APHA color number (DIN ISO 6271)	≤ 100
Density at 25°C (DIN 51757, method 4.3)	1.035 g/cm <sup>3</sup>
Boiling point (DIN EN ISO 3405)	109°C
Specific heat capacity	1.77 kJ/(kg K)
Solidification point (ISO DIS 3841)	- 60°C
Refracting index n <sub>D</sub> 20°C (DIN EN ISO 489)	1.450
Standard stabilization	300 – 400 ppm MEHQ <sup>1</sup>

### Solubility

of Laromer TPGDA in water at 25°C	0.04 g/100 ml
of water in Laromer TPGDA	1.6 g/100 ml

### Solubility, diluent tolerance

Can be mixed with most organic solvents.

<sup>1</sup>Monomethyl ether of hydroquinone

These typical values should not be interpreted as specifications.

## Applications

Laromer<sup>®</sup> TPGDA contains two 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, it is also an important feedstock for chemical synthesis.

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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<sup>®</sup> TPGDA becomes part of the polymer structure.

Laromer® TPGDA is also recommended for use in energy curable flexo, screen, and offset inks and overprint varnishes. It provides good reactivity and can be used with other reactive monomers in inks and overprint varnishes.

Laromer® TPGDA 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**

This 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.

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## **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® TPGDA.

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