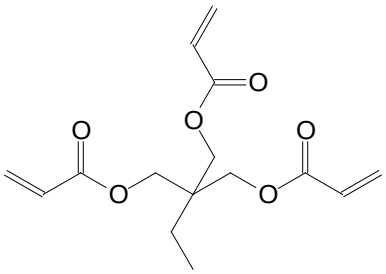
TECHNICAL DATASHEET

TMPTA

Trimethylolpropane Triacrylate

March 2017



INTRODUCTION

Trimethylolpropane triacrylate (TMPTA) is a widely used reactive diluent in ultraviolet light (UV) and electron beam (EB) curable coatings and inks. It imparts crosslinking to the cured polymer providing hardness and chemical resistance.

PERFORMANCE HIGHLIGHTS

TMPTA is characterized by:

- Low viscosity
- Low color

UV/EB curable formulated products containing TMPTA are characterized by:

- High cross-link density
- Rapid cure response
- High gloss
- Excellent hardness
- Good chemical resistance

The actual properties of UV/EB cured products also depend on the selection of other formulation components such as oligomers, additives and photoinitiators.

SUGGESTED APPLICATIONS

TMPTA is a cost effective diluent compatible with the wide range of acrylated resins used in radiation curing applications. Its ability to enhance reactivity, hardness, gloss, and chemical and wear resistance properties makes TMPTA popular for overprint varnishes, inks, coatings, traffic striping paints and rubber crosslinking.

SPECIFICATIONS

SPECIFICATIONS	VALUE
Acid value, mg KOH/g, max.	0.4
Appearance	Clear liquid
Color, Pt-Co scale(1), max.	50
Residual solvent, wt. %, max.	0.09
Viscosity, 25°C, cP/mPa·s	80-135
Water, wt. %, max.	0.1

TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.10
Flash point, Setaflash, °C	>100
Formula weight	296

CHEMICAL ABSTRACT SERVICE NUMBER

15625-89-5

2-Propenoic acid, 2-ethyl-2{[1-oxo-2-propenyl)oxy]}methyl]-1,-3 propanediyl ester

PRECAUTIONS

Before using TMPTA, see the Safety Data Sheet (SDS) for information on the identified hazards of the material and the recommended personal protective equipment and procedures.

STORAGE AND HANDLING

Care should be taken not to expose the product to high temperature conditions, direct sunlight, ignition sources, oxidizing agents, alkalis or acids. This might cause uncontrollable polymerization of the product with the generation of heat. Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Procedures that remove or displace oxygen from the material should be avoided. Do not store this material under an oxygen free atmosphere. Dry air is recommended to displace material removed from the container. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation.

See the SDS for the recommended storage temperature range for TMPTA.

Please refer to the allnex Guide to Safety and Handling of Acrylate Oligomers and Monomers for additional information on the safe handling of acrylates.

(1) Also referred to as APHA color.

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