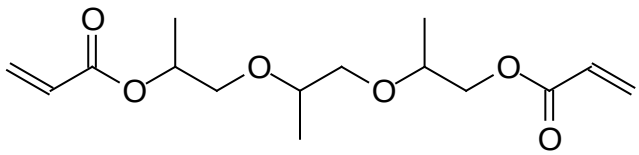
TECHNICAL DATASHEET

TPGDA

Tripropylene Glycol Diacrylate

March 2017



INTRODUCTION

Tripropylene glycol diacrylate (TPGDA) is a difunctional reactive diluent with a branched alkyl polyether backbone. Polymerization occurs when TPGDA is exposed to sources of free radicals. It is widely used as a primary diluent in the formulation of ultraviolet light (UV) and electron beam (EB) energy curable coatings and inks.

PERFORMANCE HIGHLIGHTS

TPGDA is characterized by:

- Low viscosity
- Good diluency of acrylate oligomers
- Hydrophobicity

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

- Good flexibility
- Improved water resistance
- Good cure speed without brittleness

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

TPGDA finds application in UV/EB cured ink and coating systems. TPGDA is an especially useful reactive diluent when water resistance and low viscosity are required.

- Dilution of viscous oligomers or polymers

SPECIFICATIONS

SPECIFICATIONS	VALUE
Acid value, mg KOH/g, max.	0.4
Appearance	Clear liquid
Color, Pt-Co scale(2) , max.	50
Residual solvent, wt. %, max.	0.09
Viscosity, 25°C, mPa·s/cP	10-15
Water, wt. %, max.	0.1

TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.03
Flash point, Setaflash, °C	>100
Formula weight	300

CHEMICAL ABSTRACT SERVICE NUMBER

42978-66-5

2-Propenoic acid,(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]ester

PRECAUTIONS

Before using TPGDA, 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 TPGDA.

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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