



## INTRODUCTION

Tripropylene glycol diacrylate (TPGDA BC) is a difunctional reactive diluent with a branched alkyl polyether backbone. Polymerization occurs when TPGDA BC 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.

## BIOMASS BALANCE

TPGDA BC contains a certified level of Biomass-balance Carbon content of 100% allocated to the product from certified claims on the use of specific raw material grades. Mass balance refers to a ISCC+ certified protocol in which renewable resources are mixed to fossil-based feedstocks during the production process. Via mass balance, the Better Carbon content is allocated to the finished product through credits traceability, aiming to reduce the material carbon footprint of coating. It offers sustainability benefits by decreasing reliance on finite fossil resources, lowering greenhouse gas emissions and promoting the circular economy. Biomass balance supports allnex corporate environmental goals and aligns with the United Nations Sustainable Development Goals.

## PERFORMANCE HIGHLIGHTS

TPGDA BC is characterized by:

- Low viscosity
- Good diluency of acrylate oligomers
- Hydrophobicity

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

- Dilution of viscous oligomers or polymers

## SPECIFICATIONS

Acid value, mg KOH/g	max. 0.4
Appearance	Clear liquid
Color, Apha	max. 50
Residual solvent, wt. %	max. 0.09
Viscosity, 25°C, mPa.s	10 - 15
Water, wt. %	max. 0.1

## TYPICAL PHYSICAL PROPERTIES

Density, g/cm <sup>3</sup> at 25°C	1.03
Flash point, Setaflash, °C	> 100
Formula weight	300

## TYPICAL CURED PROPERTIES

Tensile strength, psi (MPa)	5500 (38)
Elongation at break, %	5
Young's modulus, psi (MPa)	225000 (1550)
Glass transition temperature, °C	80

## PRECAUTIONS

Before using TPGDA BC, 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 BC.