



## INTRODUCTION

Trimethylolpropane trimethacrylate (TMPTMA) is a trifunctional methacrylate monomer that will readily copolymerize with other unsaturated compounds using radical curing mechanisms. Polymerization can be accomplished thermally using peroxide or azo type radical initiators, with ultraviolet (UV) or visible light using radical photoinitiators, or with high energy electrons (EB). TMPTMA is typically copolymerized with other unsaturated compounds such as vinyl, methacrylate and acrylate functional materials to increase crosslinking and improve cured polymer properties such as hardness, chemical resistance and thermal resistance.

## PERFORMANCE HIGHLIGHTS

TMPTMA is characterized by:

- Low color
- Low viscosity
- Low volatility

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

- High crosslink density
- Chemical resistance
- Hardness
- High tensile strength
- Thermal resistance

The actual properties of cured products also depend on the selection of other formulation components such as co-reactants, additives and initiators.

## SUGGESTED APPLICATIONS

TMPTMA can provide improved properties to polymers used in:

- Rubber crosslinking
- Concrete crack repair
- Anerobic and structural adhesives

## SPECIFICATIONS

	VALUE
Acid value, mg KOH/g, max.	1.0
Appearance	Clear liquid
Color, Pt-Co scale <sup>(1)</sup> , max.	100
Inhibitor (MEHQ), ppm	100-300
Viscosity, 25°C, cP/mPa·s	40-70
Water, wt. %, max.	0.1

## TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.07
Flash point, Setflash, °C	>100
Formula weight	238
Residual solvent	<0.1

## CHEMICAL ABSTRACT SERVICE NUMBER

3290-92-4

2,2-bis(2-methylprop-2-enoyloxymethyl)butyl 2-methylprop-2-enoate

## PRECAUTIONS

Before using TMPTMA, 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 TMPTMA.

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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