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[1]

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid value, mg KOH/g, max.</td>
<td>0.4</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Color, Pt-Co scale[2], max.</td>
<td>50</td>
</tr>
<tr>
<td>Residual solvent, wt. %, max.</td>
<td>0.09</td>
</tr>
<tr>
<td>Viscosity, 25°C, cP/mPa·s</td>
<td>80-135</td>
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<tr>
<td>Water, wt. %, max.</td>
<td>0.1</td>
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</table>

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

[1] Test methods are available upon request.
[2] Also referred to as APHA color.
STORAGE AND HANDLING

Before using TMPTA, consult the Safety Data Sheet for additional information on safety and handling procedures, and recommended personal protective equipment.

The recommended storage temperature for TMPTA is 4°C to 40°C (39°F to 104°F). 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. This material should not be stored for more than 2 years.

PRECAUTIONS

Avoid contact with eyes, skin and clothing. Direct contact with this material may cause moderate eye and mild skin irritation. Repeated or prolonged dermal contact may cause allergic skin reactions. Wash thoroughly after handling. Use with adequate ventilation. Keep container closed.

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