

PENTAERYTHRITOL ACRYLATE

INTRODUCTION

Pentaerythritol triacrylate (PETIA) is a multifunctional monomer containing a mixture of tri- and tetra-acrylates with a high degree of acrylic unsaturation. PETIA can be utilized in a variety of UV curable coatings and ink systems and coatings where a high degree of crosslinking is requested. PETIA polymerizes when exposed to sources of free radicals.

PERFORMANCE DATA

PETIA is characterized by:

- High acrylate functionality
- Residual hydroxyl content
- Very low vapour pressure

UV/EB cured products based on PETIA are characterized by the following performance properties:

- Fast cure response
- High crosslinking density
- Excellent hardness
- Excellent solvent resistance

TYPICAL VALUES

Appearance	clear liquid
Viscosity, 25°C, mPa.s	700 - 1500
Colour, Apha	max. 70
Acid value, mg KOH/g	max. 10

PHYSICAL PROPERTIES

Density, g/cm ³	1.18
Formula weight	298

SUGGESTED APPLICATIONS

PETIA finds application in UV/EB cured coatings and ink systems. PETIA is an especially useful monomer where fast cure speed, hardness and high gloss properties are required.

STORAGE AND HANDLING

Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.

Upon storage, PETIA may become crystalline. This crystallization can be removed by heating containers of PETIA to a uniform temperature of 50°C. Ovens or hotboxes are recommended methods of heating. Heating tapes should not be used.

Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Do not store this material under an oxygen free atmosphere. Use dry air to displace material removed from the container. This material should not be stored for more than 2 years.

PRECAUTION

The following is a summary of the precautions to be taken when handling this product. Please refer to the Safety Data Sheet for further details.

The toxicological properties of this material have not been fully determined. Products of this type can be expected to be eye and skin irritant and have the potential to cause sensitization or other allergic responses. Appropriate precautions should be taken to avoid eye and skin contact and to avoid inhalation of the aerosols or vapours. Consult the relevant Safety Data Sheet for appropriate handling procedures and protective equipment prior to using this or any other material referred to in this bulletin.

See Safety Data Sheet for emergency and first aid procedures.

STATUTORY LABELING

For Statutory Labeling information, please refer to Safety Data Sheet.