

# KRM 8452

## Technical Data Sheet

### Urethane acrylate oligomer

#### INTRODUCTION

KRM 8452 is an undiluted aliphatic urethane ten acrylate oligomer developed for energy curable systems.

#### PERFORMANCE HIGHLIGHTS

KRM 8452 is characterized by :

- Light colour
- Liquid at room temperature

UV/EB cured products based on KRM 8452 are characterized by the following performance properties:

- High hardness
- High compatibility with various polyurethane and acrylic beads additives and fillers

The actual properties of UV/EB cured formulations containing KRM 8452 depend on the selection of the other formulation components, such as co-resins, suitable additives, reactive diluents and photoinitiators.

#### SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing KRM 8452 can be diluted with solvent (eg. Ethylacetate, Butylacetate, Methyl ethyl ketone, Ethyl cellosolve, etc) and applied by spray coating, screen, roller and curtain coating methods.

KRM 8452 is recommended for use in:

- Hard coatings

Appearance Light yellow, Liquid  
Höppler viscosity at 60°C, mPa.s 1500  
Colour, Gardner 50 (APHA)

#### PHYSICAL PROPERTIES

Melting point, °C -  
Density, g/cm<sup>3</sup> n.a.  
Molecular weight, theoretical 1000  
Functionality, theoretical 10 (in maximum)  
Polymer solids, % by weight 100

#### VISCOSITY REDUCTION

KRM 8452 can be formulated with reactive monomers such as 1,6 hexanediol diacrylate (HDDA)<sup>(1)</sup>, tripropyleneglycol diacrylate (TPGDA)<sup>(1)</sup>, trimethylolpropane triacrylate (TMPTA)<sup>(1)</sup>, oligotriacrylate (OTA 480)<sup>(1)</sup> and octyl/decyl acrylate (ODA)<sup>(1)</sup>. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

#### STORAGE AND HANDLING

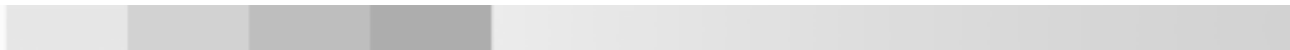
Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.

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 1 year.

<sup>(1)</sup> HDDA, TPGDA, TMPTA, OTA 480 and ODA are produced by Cytec Surface Specialties.

#### TYPICAL VALUES

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#### **PRECAUTIONS**

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 LABELLING**

Please refer to Safety Data Sheet.

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