



PHOTOMER[®] 4039 Monomer, Reactive Diluent

Product Data Sheet

General Information

PHOTOMER[®] 4039 is a monofunctional aromatic acrylate of low viscosity, low odour, moderate cure speed and classified as a mild skin irritant. Due to modification of its aromatic backbone, it has been found useful as a flexibilizer and is suggested for UV curable litho, screen and flexographic inks, clear litho coatings, and lacquers.

Chemical Data

Chemical Name	: Ethoxylated (4) Phenol Monoacrylate
Molecular weight	: 280 g/mol
CAS No.	: 56641-05-5
EINECS No.	: 500-133-9

Specification

Appearance	Visual	Clear pale yellow liquid
Viscosity @ 25 °C	Brookfield, ISO 2555	15 - 45 mPa·s
Colour (APHA)	ISO 6271	≤ 150
Acid Value	NF EN ISO 660	≤ 0.5 mg KOH/g
Moisture content	Karl Fischer, ISO 4317	≤ 0.4 %
Solvent content	GC Analysis	≤ 0.5 %

Additional Typical Properties

Surface tension:	40.7 dynes/cm
Specific Gravity @25°C:	1.120 g/cm ³
Refractive Index@20°C:	1.5060
Inhibitor content (MEHQ):	300 ppm

Application

PHOTOMER[®] 4039 may be used, after adequate testing, in applications such as topcoats for flexible substrates, especially in paper and paperboard, where low viscosities are essential to impart proper flow-out at high production speeds. PHOTOMER[®] 4039 is an effective diluent with excellent solvency and viscosity reducing characteristics and is recommended as a direct low odour replacement for PEA (Photomer 4035) and other high irritancy reactive monomers.

Formulated product properties will depend on the actual reactive monomers, oligomers and additives utilized.

Features & Benefits

UV cured neat film studies of PHOTOMER® 4039 indicate equal or better adhesion, gloss and crease characteristics on paper, plastics, aluminium and tin-plated steel as compared to conventional mono acrylate monomers. UV/EB cured neat films of PHOTOMER® 4039 on several substrates resulted in dry but tacky films. Formulations containing as much as 30 % (w/w) PHOTOMER® 4039 gave tack-free fully cured coatings.

Reduced odour, good solvency and low irritation properties make PHOTOMER® 4039 an effective monomer for low viscosity radiation curable clear and pigmented systems. Homopolymer films of PHOTOMER® 4039 exhibit tacky, dry films which are rubbery in nature, making it especially suitable for paper/paperboard and flexible plastic films.

Storage & Handling

Storage must be in a cool, shaded, well ventilated and dry area away from direct sources of heat and sunlight. PHOTOMER® 4039 may crystallize or stratify if subjected to cold or freezing conditions. Allow to warm to room temperature and mix well before using.

Subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 12 months.

PHOTOMER® 4039 should be handled in accordance with good industrial practice. Further information is provided in the material safety data sheet which is available on request.

Regulatory Status

TSCA (USA), EU (Europe), IECSC (China), AICS (Australia), ECL (Korea), Taiwan

Packaging

PHOTOMER® 4039 is available in 55 gallon (200 litre) lined tight head steel drums.

Disclaimer

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