



# PHOTOMER® 4003

## Ethoxylated Nonylphenol Monoacrylate

### Product Data Sheet

#### General Information

PHOTOMER® 4003 is a monofunctional aromatic acrylate of low viscosity, moderate odour, good cure speed and is classified as a skin irritant and sensitizer. Due to the monofunctional character of its backbone, it has been found useful as a flexibilizer and as an adhesion promoter. It is suggested for use in UV/EB curable flexo, screen and flexographic inks, clear coatings and lacquers.

#### Specification

<b>Appearance</b>	<b>Visual</b>	<b>Clear pale yellow liquid</b>
<b>Viscosity @ 25 °C</b>	<b>Brookfield, ISO 2555</b>	<b>50 - 150 mPa.s</b>
<b>Colour (APHA)</b>	<b>ISO 6271</b>	<b>≤ 200</b>
<b>Acid Value</b>		<b>≤ 0.5 mg KOH/g</b>
<b>Moisture content</b>	<b>Karl Fischer, ISO 4317</b>	<b>≤ 0.2 %</b>
<b>Volatile content</b>	<b>GC Analysis</b>	<b>≤ 0.1 %</b>

#### Additional Typical Properties

Specific Gravity @ 25 °C	1.120 g/cm <sup>3</sup>
Surface tension	35.3 dynes/cm
Flash point	> 200 °F
Inhibitor	p-methoxyphenol, 300 ppm
Molecular formula	C <sub>26</sub> H <sub>42</sub> O <sub>6</sub>

#### Application

PHOTOMER® 4003 has found application in topcoats for flexible substrates, especially in paper/ paperboard and plastics, where good adhesion and proper flow-out at high production speeds are required.

#### UV Properties

UV cured neat film studies of PHOTOMER® 4003 indicates equal or better adhesion, gloss and flexibility characteristics on paper, plastics and metals as compared to conventional monoacrylate monomers. UV and EB cured neat films of PHOTOMER® 4003 on several substrates resulted in dry but slightly tacky films.

## PHOTOMER® 4003

### Film Studies

Cure passes  
Scuff resistance  
Gloss 60°  
Adhesion  
Pencil hardness  
Conical mandrel

### Aluminium

17  
fair  
good  
100% (#600 Cellotape)  
4H  
< 0.25"

### Cure conditions:

6.75 µm wet film thickness;  
6% Omnirad BP, 2% TEOA;  
UV lamp: one 100W/cm

RDS Coating Rod #3;

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

## Storage & Handling

PHOTOMER® 4003 may congeal or stratify if cold. Allow to warm to room temperature and mix well on a drum roller before using. Storage must be in a cool, shaded, well ventilated and dry area away from direct sources of heat and sunlight.

Subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 24 months.

PHOTOMER® 4003 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), NDSL (Canada), PICCS (Philippines), AICS (Australia), NZIoC (New Zealand), ECL (Korea), ENCS (Japan), Taiwan

## Packaging

PHOTOMER® 4003 is available in 55 gallon (200 liter) lined tight head steel drums.

### Disclaimer

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