

## Trimethylolpropane Triacrylate

### Description

UVP 0301 is an aliphatic trifunctional acrylate of low viscosity and excellent crosslinking reactivity. In comparison to other trifunctional acrylates, it is an effective reactive diluent with excellent solvency and viscosity reducing characteristics in UV/EB curable formulations based on epoxy,

### Product Highlights

Excellent chemical resistance  
Excellent hardness  
Excellent abrasion resistance

### Product Highlights and properties

UV/EB curable coatings and Varnishes  
UV Industrial Graphic arts application.  
UV Screen Printing Inks  
UV Lithographic Printing Inks  
Other UV printing Inks

### Film Studies

	Aluminum
Scuff Resistance	Good
Gloss 60	100
Pencil Hardness	6 H
Chemical Resistance	100+(MEK Double Rubs)
Conical Mandrel	<0.5*
Cure Conditions	RDS Rod # 3
0.27 mils wet film thickness	
6% Benzophenone 2% TEOA	
100 Ft/Min one 300 watt/inch UV lamp	

### UVP 0301 Typical Physical and Chemical Properties

Appearance	Clear Pale Yellow Liquid
Functionality	3
Colour Gardner Max.	1
Acid Value Max.	1
Viscosity Cps @ 25 C mPa.s	70 - 150
Refractive Index	1.4723
Tg C	62
Molecular Weight	296
Density g/cm <sup>3</sup>	1.108
Surface Tension Dynes/Cm	36.8

### Storage And Handling

UVP 0301 may crystallize or stratify if subjected to cold or freezing conditions. Allow to warm to room temperature and mix well before using. Storage must be in a cool, shaded, well ventilated and dry area away from sources of direct heat and sunlight. Subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 12 months. Additional handling information is contained within the material safety data sheet which is available upon request.

### Packing Codes

PAC1013 Epoxy Coated Steel Closed Head drums 200 Kg  
\* Special packing also available on request

## Formulation Suggestions for UVP 0301

Multifunctional acrylates such as UVP 0301 enhance the hardness, chemical resistance and cure speed of UV/EB curable coatings on a variety of substrates, such as vinyl and LDPE as well as rigid, unyielding surfaces like wood.

PVC Formula Components	Sheeting	LDPE	Wood
Difunctional Epoxy Acrylate		40	40
Urethane Acrylate	26		
Trimethylol Propane Triacrylate	30	21	15
1,6 Hexane Diol Diacrylate	16		
Bisphenol A (4EO) Diacrylate		10	
Ethoxylated(3) Phenol Monoacrylate	20	15	
Tripropyleneglycol Diacrylate			37
Neopentylglycol (2PO) Diacrylate		10	
Amine Synergist	2		2
Photoinitiator BDK			4
Photoinitiator Benzophenone	2		2
Photoinitiator 73	4		4

## Properties

Cure Speed	50	100	100
Scuff Resistance	Good	Good	Good
Gloss 60	Good	Good	Good
Adhesion (# 600 Cellotape)	100%	100%	100%
Solvent Resistance (Mek Double Rubs)	100+	100+	100+
Pencil Hardness	5H	6H	6H

100 100 Good Good Good Good 100% 100% 100+ 100+

**Cure Conditions** RDS Rod # 3

0.27 mils wet film thickness

one 300 watt/inch UV lamp