

# Safety Data Sheet

Issuing Date 2016/03/18

Version 1

## SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Identification of the product** GCC VARNISH 26500977G

**Reference number** TWNENR0061679 - 1

**Recommended uses and restrictions on use** Inkjet ink

**Supplier** TOYO ADVANCED SCIENCE TAIWAN CO.,LTD.  
6f., No.318, Songjiang Rd., Zhongshan District, Taipei City 10468, Taiwan  
TEL: 02-2536-2628  
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**Emergency Telephone Number** Same as Supplier

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

### Physical and chemical hazards

Not classified

### Health hazards

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

### Environmental hazards

Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 2

GHS Label elements

### Pictogram



**Signal Word**

WARNING

Hazard statements

H302 - Harmful if swallowed  
 H312 - Harmful in contact with skin  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H335 - May cause respiratory irritation  
 H361 - Suspected of damaging fertility or the unborn child  
 H402 - Harmful to aquatic life  
 H411 - Toxic to aquatic life with long lasting effects

### Precautionary Statements

#### Precautionary Statements - Prevention

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P264 - Wash hands thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P272 - Contaminated work clothing should not be allowed out of the workplace  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

#### Precautionary Statement - Response

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 P302 + P352 - IF ON SKIN: Wash with plenty of water and soap  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P312 - Call a POISON CENTER or doctor if you feel unwell  
 P321 - Specific treatment  
 P321 - Specific treatment (see supplemental instructions on the administration of antidotes on this label)  
 P330 - Rinse mouth  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P362 + P364 - Take off all contaminated clothing and wash it before reuse  
 P391 - Collect spillage

#### Precautionary Statement - Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P405 - Store locked up

#### Precautionary Statement - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

### Hazards not otherwise classified (HNOC)

No information available

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substance/mixture

Mixture

Chemical Name	Chemical Name	CAS No.	Weight (%)
Tripropylene glycol diacrylate	Tripropylene glycol diacrylate	42978-66-5	50-60%

Photosensitive monomer	Photosensitive monomer	Trade Secret	20-30%
2,4,6-Trimethylbenzoyl diphenylphosphine oxide	2,4,6-Trimethylbenzoyl diphenylphosphine oxide	75980-60-8	5-10%
1-Propanone, 2-methyl-1-[4-(methylthio)ph enyl]-2-(4-morpholinyl)-	1-Propanone, 2-methyl-1-[4-(methylthio)ph enyl]-2-(4-morpholinyl)-	71868-10-5	5-10%
Ethylene glycol monobutyl ether acetate	Ethylene glycol monobutyl ether acetate	112-07-2	1-5%
2,6-Di-tert-butyl-4-methylphe nol	2,6-Di-tert-butyl-4-methylphe nol	128-37-0	<1%

## SECTION 4. FIRST-AID MEASURES

### Description of necessary first-aid measures

#### **Inhalation**

Move victim to fresh air  
Keep at rest  
If breathing is irregular or stopped, administer artificial respiration  
If symptoms persist, call a physician

#### **Skin contact**

Remove contaminated clothing and shoes  
Remove as much as possible by wiping  
Wash off immediately with soap and plenty of water  
Get medical attention immediately if symptoms occur

#### **Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Get medical attention immediately

#### **Ingestion**

Get medical attention immediately

### Most Important Symptoms/Effects

No information available

### Protection of first-aiders

No information available

### Notes to physician

Treat symptomatically

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

#### **Extinguishing Media Which Must Not Be Used For Safety Reasons**

Water jet

### Specific hazards arising from the chemical

See section 10 (Hazardous decomposition products)

### Specific methods

May ignite combustibles (wood paper, oil, clothing, etc.)  
Cool drums with water spray

### Special protective equipment for fire-fighters

Wear personal protective equipment  
Evacuate area and fight fire from a safe distance

## SECTION 6. ACCIDENTAL RELEASE MEASURES

<b><u>Personal precautions, protective equipment, and emergency procedures</u></b>	Wear suitable protective clothing Evacuate personnel to safe areas
<b><u>Environmental precautions</u></b>	Avoid release to the environment. Dispose of contents/ container to an approved waste disposal plant Collect spillage Dike to collect large liquid spills
<b><u>Recovery and neutralization</u></b>	Take up with sand, earth or other non-combustible absorbent material A lot of leakage things have the flow first stopped by earth and sand etc., and need to be led to a safe place. Keep in suitable, closed containers for disposal Use only non-sparking tools

## SECTION 7. HANDLING AND STORAGE

### Handling

<b>Technical measures</b>	Ensure adequate ventilation Avoid contact with skin, eyes or clothing Wear personal protective equipment May produce an allergic reaction
<b>Advice on safe handling</b>	Wash hands before breaks and immediately after handling the product Smoking, eating and drinking should be prohibited in the application area

### Storage

<b>Technical measures/Storage conditions</b>	Polymerization can occur.- Conditions to avoid: ultraviolet (UV), Heat Keep container tightly closed Use the container with light shielding effect. Keep cool. Protect from sunlight
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## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b><u>Engineering measures</u></b>	Ensure adequate ventilation
<b><u>Exposure Guidelines</u></b>	
<b><u>Personal protective equipment</u></b>	
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment
<b>Hand protection</b>	Rubber/latex/neoprene or other suitable chemical resistant gloves
<b>Eye protection</b>	Goggles
<b>Skin and body protection</b>	Long sleeved clothing Chemical resistant apron Antistatic boots
<b><u>Hygiene measures</u></b>	Handle in accordance with good industrial hygiene and safety practice

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Color</b>	No information available
<b>Odor</b>	No information available	<b>Odor Threshold</b>	No information available

### Property

<b>pH VALUE</b>	No information available
<b>Melting point/range</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	140 C and above (Cleveland Open Cup (COC))

<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	1.01 - 1.06 / 25 C
<b>Water solubility</b>	No information available
<b>Solubility in other solvents</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Density</b>	No information available

## SECTION 10. STABILITY AND REACTIVITY

<b>Stability</b>	Polymerization reaction is caused by ultraviolet rays, heat, acid, alkali and metal powder.
<b>Possibility of hazardous reactions</b>	This product does not have the reactivity with the water.
<b>Conditions to avoid</b>	High temperature and direct rays of the sun
<b>Materials to avoid</b>	Strong acid, strong alkali and strong oxidizer
<b>Hazardous decomposition products</b>	No information available

## SECTION 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure** See Section 4

**Acute toxicity** No acute toxicity information is available for this product

Chemical Name	Acute toxicity - Oral	Acute toxicity - Dermal	Acute toxicity - Inhalation
Trippropylene glycol diacrylate	LD50 = 3000 mg/kg (Rat)	LD50 > 2 g/kg (Rabbit)	-
Ethylene glycol monobutyl ether acetate	LD50 = 1600 mg/kg (Rat)	LD50 = 1480 mg/kg (Rabbit)	-
2,6-Di-tert-butyl-4-methylphenol	LD50 = 890 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	-

<b>Skin corrosion/irritation</b>	Category 2 Causes skin irritation
<b>Serious eye damage/eye irritation</b>	Category 2: Causes serious eye irritation
<b>Skin sensitization</b>	Category 1: May cause an allergic skin reaction
<b>Carcinogenicity</b>	No Information available as a product

Chemical Name	Taiwan - Occupational Exposure Limits - Carcinogens	ACGIH - Carcinogens	IARC - Carcinogens
Ethylene glycol monobutyl ether acetate	-	A3	-

**Reproductive toxicity** Category 2: Suspected of damaging fertility or the unborn child

**Specific target organ toxicity (single exposure)** Category 3: May cause respiratory irritation

## SECTION 12. ECOLOGICAL INFORMATION

**Environmental hazards** There is no known ecological information for this product

Chemical Name	Fish(96h)	Crustacea(48h)	Algae(72h)
Tripropylene glycol diacrylate	-	EC50 = 88.7 mg/L (Daphnia magna)	EC50 > 28 mg/L (Desmodesmus subspicatus)
Ethylene glycol monobutyl ether acetate	-	EC50 = 37 mg/L (Daphnia magna)	EC50 > 500 mg/L (Desmodesmus subspicatus)
2,6-Di-tert-butyl-4-methylphenol	-	-	EC50 = 6 mg/L (Pseudokirchneriella subcapitata) EC50 > 0.42 mg/L (Desmodesmus subspicatus)

**Persistence and degradability** No information available

**Bioaccumulative potential** No information available

**Mobility in soil** No information available

**Other information** No information available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Method

**Waste from residues/unused products** To discard the container after using up the contents  
Dispose of in accordance with federal, state and local regulations

**Contaminated packaging** Empty containers should be recycling or disposal in accordance with the law

## SECTION 14. TRANSPORT INFORMATION

ADR/RID ICAO/IATA IMDG/IMO

**UN number** 3082

**UN Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**UN Classification** Class 9: Miscellaneous dangerous substances and articles

**Packaging group** III

**Marine pollutant** P

**Special safety measures** Ground and bond containers when transferring material

## SECTION 15. REGULATORY INFORMATION

**Toxic Chemical Substances Control Act** Not Applicable (Class1, Class2, Class3, Class4)

**Taiwan Occupational Safety and Health Act**

Chemical Name	Hazradous and Harmful Substances
Tripropylene glycol diacrylate	Present
2,4,6-Trimethylbenzoyl diphenylphosphine oxide	Present

**Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste**      Applicable

#### OTHER INFORMATION

No information available

### SECTION 16. OTHER INFORMATION

#### Legend

#### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA:                      Time weighted average                      STEL:                      Short term exposure limit  
Ceiling:                      Maximum limit value

**Literary reference**                      Classification according to Regulation (EC) No. 1272/2008 [CLP]  
ACGIH (American Conference of Governmental Industrial Hygienists)  
IARC (International Agency for Research on Cancer)

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**Prepared By**

**Issuing Date**                      2016/03/18

**Revision Date**                      -

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