



# SAFETY DATA SHEET

Issuing Date 24-May-2015

Revision Date 24-May-2015

Revision Number 0

## Section 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product Code(s) 400230

Product Name UVR-110W

Contains Trimethylolpropane triacrylate, Quartz, 2-Hydroxyethyl methacrylate

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use UV Cure Legend Ink

Uses advised against No information available

### 1.3. Details of the supplier of the safety data sheet

#### Company

Taiyo America, Inc.  
2675 Antler Drive  
Carson City, NV 89701  
TEL: 775-885-9959

#### For further information, please contact

E-mail Address No information available.

### 1.4. Emergency telephone number

Emergency Telephone Number 775-885-9959

Europe	112
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## Section 2. Hazards identification

### 2.1. - Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1

#### Physical Hazards

None

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Symbol(s) T - Toxic

R-code(s) Carc. cat. 1;R49 - Xn;R48/20 - Xi;R36/38 - R43

For the full text of the R-phrases mentioned in this Section, see Section 16

### 2.2. Label Elements



Signal Word

Warning

**Hazard Statements**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

EUH208 - May produce an allergic reaction

**Precautionary Statements**

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P270 - Do not eat, drink or smoke when using this product

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P362 - Take off contaminated clothing and wash before reuse

**2.3. Other information**

Contains Diethylene glycol dimethacrylate

## Section 3. Composition/information on ingredients

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Chemical Name	EC-No	CAS-No	Weight %	Classification	EU - GHS Substance Classification	REACH No.
Talc	238-877-9	14807-96-6	10-30	-		No data available
Trimethylolpropane triacrylate	Present	15625-89-5	10-30	Xi; R36/38 R43	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317)	No data available
Titanium dioxide	236-675-5	13463-67-7	10-30	-		No data available
Quartz	Present	14808-60-7	10-30	-	STOT RE 2 (H373)	No data available
2-Hydroxyethyl methacrylate	212-782-2	868-77-9	5-10	Xi; R36/38 R43	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317)	No data available
Silicon dioxide	Present	7631-86-9	1-5	-		No data available

**For the full text of the R-phrases mentioned in this Section, see Section 16**

**For the full text of the H-Statements mentioned in this Section, see Section 16**

## Section 4. First aid measures

**4.1. Description of first-aid measures**

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<b>General Advice</b>	Immediate medical attention is required. If symptoms persist, call a physician.
<b>Eye Contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
<b>Ingestion</b>	Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

#### **4.2. Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms/Effects** No information available.

#### **4.3. Indication of immediate medical attention and special treatment needed**

**Notes to Physician** May cause sensitization of susceptible persons. Treat symptomatically.

### **Section 5. Fire-fighting measures**

#### **5.1. Extinguishing media**

##### **Suitable Extinguishing Media**

Water spray. Dry powder. Foam.

##### **Extinguishing media which must not be used for safety reasons**

No information available.

#### **5.2. Special hazards arising from the substance or mixture**

##### **Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by skin contact.

#### **5.3. Advice for firefighters**

##### **Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

### **Section 6. Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

#### **6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas.

#### **6.3. Methods and materials for containment and cleaning up**

Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

#### **6.4. Reference to other sections**

See Section 12 for additional information.

## Section 7. Handling and storage

### 7.1. Precautions for Safe Handling

#### Handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.

#### Hygiene Measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

### 7.3. Specific end use(s)

#### Exposure Scenario

No information available.

#### Other Guidelines

No information available.

## Section 8. Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Talc 14807-96-6		STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>		TWA: 2 mg/m <sup>3</sup>	
Titanium dioxide 13463-67-7		STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	
Quartz 14808-60-7		STEL: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	
Silicon dioxide 7631-86-9		STEL: 18 mg/m <sup>3</sup> STEL: 7.2 mg/m <sup>3</sup> TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup>			TWA: 4 mg/m <sup>3</sup>
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Talc 14807-96-6 ( 10-30 )		TWA: 2 mg/m <sup>3</sup>	TWA: 0.25 mg/m <sup>3</sup>	TWA: 0.5 fiber/cm <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 0.3 fiber/cm <sup>3</sup>
Titanium dioxide 13463-67-7 ( 10-30 )		TWA: 10 mg/m <sup>3</sup>			TWA: 6 mg/m <sup>3</sup>
Quartz 14808-60-7 ( 10-30 )		TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.075 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>
Silicon dioxide 7631-86-9 ( 1-5 )				TWA: 5 mg/m <sup>3</sup>	
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Talc 14807-96-6	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	TWA: 4.0 mg/m <sup>3</sup> TWA: 1.0 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup> STEL: 4 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 0.8 mg/m <sup>3</sup>
Titanium dioxide 13463-67-7	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> TWA: 10.0 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>

Quartz 14808-60-7	TWA: 0.15 mg/m <sup>3</sup>	TWA: 0.15 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> TWA: 0.3 mg/m <sup>3</sup> TWA: 4.0 mg/m <sup>3</sup> TWA: 1.0 mg/m <sup>3</sup>	TWA: 0.3 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> STEL: 0.9 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>
2-Hydroxyethyl methacrylate 868-77-9				TWA: 2 ppm TWA: 11 mg/m <sup>3</sup> STEL: 4 ppm STEL: 16.5 mg/m <sup>3</sup>	
Silicon dioxide 7631-86-9	TWA: 4 mg/m <sup>3</sup> TWA: 0.3 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup> TWA: 0.3 mg/m <sup>3</sup>		TWA: 1.5 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup>

**Derived No Effect Level** No information available  
**Predicted No Effect Concentration (PNEC)** No information available.

## 8.2. Exposure controls

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.  
**Personal protective equipment**  
**Eye Protection** Safety glasses with side-shields.  
**Skin and Body Protection** Lightweight protective clothing.  
**Hand Protection** Protective gloves.  
**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**Environmental Exposure Controls** No information available.

## Section 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical State** Viscous liquid  
**Appearance** White  
**Odor** Slight Solvent

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
<b>pH</b>	No data available	None known
<b>Melting Point/Range</b>	No data available	None known
<b>Boiling Point/Boiling Range</b>	No data available	None known
<b>Flash Point</b>	>200 °C / >392 °F	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Vapor Pressure</b>	No data available	None known
<b>Vapor Density</b>	No data available	None known
<b>Relative Density</b>	1.68	None known
<b>Water Solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition Temperature</b>	No data available	None known
<b>Decomposition Temperature</b>	No data available	None known
<b>Viscosity</b>	No data available	None known
<b>Flammable Properties</b>	Combustible material: may burn but does not ignite readily.	
<b>Explosive Properties</b>	No data available	
<b>Oxidizing Properties</b>	No data available	

### 9.2. Other information

**VOC Content (%)** 0  
**Flammability Limits in Air** No data available

## Section 10. Stability and reactivity

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

None under normal processing.

**10.4. Conditions to avoid**

Incompatible products.

**10.5. Incompatible materials**

Oxidizing agents. Peroxides. Free radical initiators.

**10.6. Hazardous decomposition products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides.

## Section 11. Toxicological information

**11.1. Information on toxicological effects****Acute Toxicity****Product Information****Inhalation**

There is no data available for this product.

**Eye Contact**

Causes serious eye irritation.

**Skin Contact**

Causes skin irritation. May cause allergic skin reaction

**Ingestion**

Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Trimethylolpropane triacrylate	> 5000 mg/kg ( Rat )	= 5000 mg/kg ( Rabbit )	
Quartz	= 500 mg/kg ( Rat )		
Titanium dioxide	> 10000 mg/kg ( Rat )		> 6820 mg/m <sup>3</sup>
2-Hydroxyethyl methacrylate	= 5050 mg/kg ( Rat )	>3000 mg/kg ( Rabbit )	
Silicon dioxide	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	>2.2 mg/L ( Rat ) 4 h

**Sensitization**

May cause an allergic skin reaction. May cause sensitization of susceptible persons. May cause sensitization by skin contact.

**Mutagenic Effects**

No information available.

**Carcinogenic Effects**

This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product

**Reproductive Toxicity**

No information available.

**Developmental Toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Target Organ Effects**

Eyes. Lungs. Respiratory system.

**Aspiration Hazard**

No information available.

## Section 12. Ecological information

**12.1. Toxicity****Ecotoxicity Effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)

Talc		LC50 96 h: > 100 g/L semi-static (Brachydanio rerio)		
2-Hydroxyethyl methacrylate		LC50 96 h: 213-242 mg/L flow-through (Pimephales promelas) LC50 96 h: = 227 mg/L (Pimephales promelas)		
Silicon dioxide	EC50 72 h: = 440 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 5000 mg/L static (Brachydanio rerio)		EC50 48 h: = 7600 mg/L (Ceriodaphnia dubia)

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential.**

Chemical Name	Log Pow
2-Hydroxyethyl methacrylate	0.47

**12.4. Mobility in soil**

Adsorbs on soil.

**12.5. Results of PBT and vPvB assessment**

No information available.

**12.6. Other adverse effects**

This product does not contain any known or suspected endocrine disruptors.

## Section 13. Disposal considerations

**13.1. Waste treatment methods**

<b>Waste from Residues / Unused Products</b>	Dispose of in accordance with local regulations.
<b>Contaminated Packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Other Information</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14. Transport information

**IMDG/IMO**

<b>14.1. UN-Number</b>	Not regulated.
<b>14.2. Proper Shipping Name</b>	Not regulated.
<b>14.3. Hazard Class</b>	Not regulated.
<b>14.4. Packing Group</b>	Not regulated.
<b>Description</b>	Not applicable.
<b>14.5. Marine Pollutant</b>	None.
<b>14.6. Special Provisions</b>	None.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.

**RID**

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

**ADR**

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

**ICAO**

14.1. UN-Number	Not regulated.
14.2. Proper shipping name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

**IATA**

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

## Section 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances



IECSC - China Inventory of Existing Chemical Substances  
AICS - Australian Inventory of Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances

### **15.2. Chemical Safety Assessment**

No information available

## **Section 16. Other information**

### **Full text of R-phrases referred to under Sections 2 and 3**

R43 - May cause sensitization by skin contact

R49 - May cause cancer by inhalation

R36/38 - Irritating to eyes and skin

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

### **Full text of H-Statements referred to under sections 2 and 3**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

EUH208 - May produce an allergic reaction

### **Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

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**Revision Note** Initial Release.

**This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006**

### **General Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet