

# SAFETY DATA SHEET

US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Issuing Date 18-Jan-2023

Revision Date 18-Jan-2023

Revision Number 1

## 1. Identification

### Product identifier

Product Name IJSR-4000 JM02DG

### Other means of identification

Product Code(s) 800158

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Inkjet solder mask

Restrictions on use No information available

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

#### Supplier Address

Taiyo America, Inc.  
2675 Antler Drive  
Carson City, NV 89701  
TEL: 775-885-9959 (M-F, 8 AM - 4 PM, Pacific Time Zone)

E-mail SDSinfo@taiyo-america.com

### Emergency telephone number

Emergency telephone +1-813-248-0585 International - product safety issues (24 hours; in most major languages)  
+1-800-255-3924 Within U.S.A. only (24 hours)  
(Contract # MIS0007979)

## 2. Hazard(s) identification

### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 1B

### Label elements

#### **Danger**

#### **Hazard statements**

Causes skin irritation.  
Causes serious eye damage.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
May damage fertility or the unborn child.

**Precautionary Statements - Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing vapor or mist. Contaminated work clothing must not be allowed out of the workplace.

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.

**Skin**

IF ON SKIN: Wash with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice and attention.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant.

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Oxybis(methyl-2,1-ethanediy) diacrylate	57472-68-1	40 - 50	-	-
Hexamethylene diacrylate	13048-33-4	5 - 10	-	-
Hexamethylene diisocyanate, oligomerisation product, blocked with 3,5-Dimethyl-1H-pyrrazole	163206-31-3	5 - 10	-	-
4-hydroxybutyl acrylate	2478-10-6	1 - 5	-	-
2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	119344-86-4	1 - 5	-	-
Trimethylolpropane polyoxyethylene triacrylate	28961-43-5	1 - 5	-	-
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	0.5 - < 1	-	-
Melamine	108-78-1	0.5 - < 1	-	-
Bisphenol A - Epichlorohydrin polymer	25068-38-6	0.1 - 0.5	-	-

### 4. First-aid measures

**Description of first aid measures**

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Burning sensation. Itching. Rashes. Hives.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Foam.
<b>Unsuitable extinguishing media</b>	Water.
<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitizer. May cause sensitization by skin contact.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

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

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

#### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Tight sealing safety goggles.

#### Hand protection

Wear suitable gloves. Impervious gloves.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

#### Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### Environmental exposure controls

Avoid release to the environment.

#### General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

#### Appearance

Physical state	Liquid
Color	Green
Odor	Mild
Odor threshold	No information available

#### Property

##### pH

#### Values

#### Remarks • Method

##### Melting point / freezing point

No data available

No data available

Initial boiling point and boiling range	No data available
Flash point	110 °C / 230 °F
Evaporation rate	No data available
Flammability	No data available
Flammability Limit in Air	
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

**Other information**

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
VOC content	0 %
Liquid Density	No information available
Bulk density	No information available

**10. Stability and reactivity**

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

**11. Toxicological information****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Redness. Burning. May cause blindness. Itching. Rashes. Hives. May cause redness and tearing of the eyes.

### Acute toxicity

#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral) > 2,000 mg/kg  
ATEmix (dermal) > 2,000 mg/kg

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Oxybis(methyl-2,1-ethanediyl) diacrylate	= 4600 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	-
Hexamethylene diacrylate	= 5 g/kg ( Rat )	= 3600 mg/kg ( Rabbit )	-
Hexamethylene diisocyanate, oligomerisation product, blocked with 3,5-Dimethyl-1H-pyrazole	-	-	> 2379 mg/m <sup>3</sup> ( Rat ) 4 h
4-hydroxybutyl acrylate	-	> 2000 mg/kg ( Rat )	-
2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	> 2000 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
Trimethylolpropane polyoxyethylene triacrylate	-	> 13200 mg/kg ( Rabbit )	-
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	-	> 2000 mg/kg ( Rat )	-
Melamine	= 3161 mg/kg ( Rat )	> 1 g/kg ( Rabbit )	-
Bisphenol A - Epichlorohydrin polymer	= 11400 mg/kg ( Rat )	-	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

**Respiratory or skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Melamine 108-78-1	-	Group 2B	-	X

### Legend

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

<b>Reproductive toxicity</b>	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**12. Ecological information****Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hexamethylene diisocyanate, oligomerisation product, blocked with 3,5-Dimethyl-1H-pyrazole 163206-31-3	-	LC50: =562mg/L (96h, Danio rerio)	-	-
Trimethylolpropane polyoxyethylene triacrylate 28961-43-5	-	LC50: =1.95mg/L (96h, Danio rerio)	-	-
Melamine 108-78-1	EC50: =940mg/L (96h, Scenedesmus pannonicus)	LC50: >3000mg/L (96h, Poecilia reticulata)	-	EC50: >2000mg/L (48h, Daphnia magna)

**Persistence and degradability** No information available.**Bioaccumulation****Component Information**

Chemical name	Partition coefficient
Oxybis(methyl-2,1-ethanediyl) diacrylate 57472-68-1	0.39
Hexamethylene diacrylate 13048-33-4	2.81
Hexamethylene diisocyanate, oligomerisation product, blocked with 3,5-Dimethyl-1H-pyrazole 163206-31-3	6.4
4-hydroxybutyl acrylate 2478-10-6	0.77
2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one 119344-86-4	5.73
Trimethylolpropane polyoxyethylene triacrylate 28961-43-5	2.89
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8	3.1
Melamine 108-78-1	-1.22

**Mobility in soil** No information available.

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations, Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

### 15. Regulatory information

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

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### International Inventories

Contact supplier for inventory compliance status

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

##### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

##### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.



**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Melamine 108-78-1	-	X	X
C.I. Pigment Blue 15 147-14-8	X	-	X
Phenoxyethanol 122-99-6	X	-	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

**NFPA** Health hazards 3 Flammability 1 Instability 0 Special hazards -  
**HMIS** Health hazards 3\* Flammability 1 Physical hazards 0 Personal protection X  
 Chronic Hazard Star Legend \* = Chronic Health Hazard

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
 Ceiling Maximum limit value \* Skin designation

**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

**Issuing Date** 18-Jan-2023

**Revision Date** 18-Jan-2023

**Revision Note**

Initial Release.

**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**