

# 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 06-Jul-2021

Revision Date 06-Jul-2021

Revision Number 1

## 1. Identification

### Product identifier

Product Name CA-40 HH01XR

### Other means of identification

Product Code(s) 800166

Synonyms None

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

Recommended use Solder mask part B  
For professional use only

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 775-885-9959

## 2. Hazard(s) identification

### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 4

### Label elements

#### Warning

#### Hazard statements

Combustible liquid.  
Causes skin irritation.  
Causes serious eye irritation.

May cause an allergic skin reaction.  
 Suspected of causing cancer.  
 Suspected of damaging fertility or the unborn child.  
 May cause damage to organs through prolonged or repeated exposure.



#### 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. Contaminated work clothing must not be allowed out of the workplace. Do not breathe dust, fume, gas, mist, vapors and spray. Keep away from flames and hot surfaces. - No smoking.

#### 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. If eye irritation persists: Get medical advice and attention.

#### 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.

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

#### Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep cool.

#### Precautionary Statements - Disposal

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

#### Other information

Harmful to aquatic life with long lasting effects. Harmful 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)
Barium sulfate	7727-43-7	30-40	-	-
DPHA penta and Hexa Quali	1384855-91-7	10-20	-	-
Bisphenol A diglycidyl ether	1675-54-3	0-7.5	-	-
Bisphenol A - Epichlorohydrin polymer	25068-38-6	0-7.5	-	-
(2-methoxymethylethoxy)propanol	34590-94-8	1-5	-	-
Melamine	108-78-1	1-5	-	-
2-(2-ethoxyethoxy)ethyl acetate	112-15-2	1-5	-	-
Naphtha (petroleum), heavy aromatic	64742-94-5	1-<3	-	-

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	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>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. 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>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing.

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

<b>Symptoms</b>	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.
-----------------	---

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
---------------------------	--

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Foam.
<b>Unsuitable extinguishing media</b>	None known based on information supplied.
<b>Specific hazards arising from the chemical</b>	Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. 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>	Yes.
<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>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. 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**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. 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. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up.

**8. Exposure controls/personal protection****Control parameters****Exposure Limits**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust	
(2-methoxymethylethoxy)propanol 34590-94-8	STEL: 150 ppm TWA: 100 ppm S*	TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 600 mg/m <sup>3</sup> (vacated) STEL: 150 ppm (vacated) STEL: 900 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 600 ppm TWA: 100 ppm TWA: 600 mg/m <sup>3</sup> STEL: 150 ppm STEL: 900 mg/m <sup>3</sup>	
Chemical name	Alberta	British Columbia	Ontario	Quebec
Barium sulfate 7727-43-7	TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
(2-methoxymethylethoxy)propanol 34590-94-8	TWA: 100 ppm TWA: 606 mg/m <sup>3</sup> STEL: 150 ppm STEL: 909 mg/m <sup>3</sup> Skin	TWA: 100 ppm STEL: 150 ppm Skin	TWA: 100 ppm STEL: 150 ppm Skin	TWA: 100 ppm TWA: 606 mg/m <sup>3</sup> STEL: 150 ppm STEL: 909 mg/m <sup>3</sup> Skin

**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.

**General hygiene considerations**                      Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

### **9. Physical and chemical properties**

#### **Information on basic physical and chemical properties**

**Appearance**                                      Clear liquid  
**Physical state**                                      Liquid  
**Color**    Amber  
**Odor**    Organic solvent  
**Odor threshold**                                      No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>		No data available
<b>Melting point / freezing point</b>		No data available
<b>Initial boiling point and boiling range</b>		No data available
<b>Flash point</b>	75 °C / 167 °F	
<b>Evaporation rate</b>		No data available
<b>Flammability</b>		No data available
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>		No data available
<b>Lower flammability or explosive limits</b>		No data available
<b>Vapor pressure</b>		No data available
<b>Vapor density</b>		No data available
<b>Relative density</b>		No data available
<b>Water solubility</b>		No data available
<b>Solubility(ies)</b>		No data available
<b>Partition coefficient</b>		No data available
<b>Autoignition temperature</b>		No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		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 (%)**                                      7.4  
**VOC**    114.7 g/L

**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** Heat, flames and sparks.  
**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.  
**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

**Skin contact** Specific test data for the substance or mixture is not available. Causes skin irritation. May cause sensitization by skin contact. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

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

### Acute toxicity

#### Numerical measures of toxicity

Based on available data, the classification criteria are not met

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Barium sulfate	= 307000 mg/kg ( Rat )	-	-
Bisphenol A diglycidyl ether	= 11300 µL/kg ( Rat )	= 20000 mg/kg ( Rabbit )	-
Bisphenol A - Epichlorohydrin polymer	= 11400 mg/kg ( Rat )	-	-
(2-methoxymethylethoxy)propanol	= 5.35 g/kg ( Rat )	= 9500 mg/kg ( Rabbit )	-
Melamine	= 3161 mg/kg ( Rat )	> 1 g/kg ( Rabbit )	-
2-(2-ethoxyethoxy)ethyl acetate	= 11 g/kg ( Rat )	= 15100 mg/kg ( Rabbit )	-

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	Classification based on data available for ingredients. May cause sensitization by skin contact.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	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
Bisphenol A diglycidyl ether 1675-54-3	-	Group 3	-	-
Melamine 108-78-1	-	Group 2B	-	X

#### Legend

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

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in 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. Suspected of damaging fertility or the unborn child.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
DPHA penta and Hexa Quali 1384855-91-7	-	LC50: =8.9mg/L (96h, Cyprinus carpio)	-	-
(2-methoxymethylethoxy)propanol 34590-94-8	-	LC50: >10000mg/L (96h, Pimephales promelas)	-	LC50: =1919mg/L (48h, Daphnia magna)
Melamine 108-78-1	EC50: =940mg/L (96h, Scenedesmus pannonicus)	LC50: >3000mg/L (96h, Poecilia reticulata)	-	EC50: >2000mg/L (48h, Daphnia magna)
Naphtha (petroleum), heavy aromatic 64742-94-5	-	LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =19mg/L (96h, Pimephales promelas) LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =41mg/L (96h,	-	EC50: =0.95mg/L (48h, Daphnia magna)

		Pimephales promelas LC50: =45mg/L (96h, Pimephales promelas)		
--	--	--	--	--

**Persistence and degradability** No information available.

### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
(2-methoxymethylethoxy)propanol 34590-94-8	-0.064
Melamine 108-78-1	1.14
Naphtha (petroleum), heavy aromatic 64742-94-5	6.1

**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

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
DPHA penta and Hexa Quali	1384855-91-7		
Melamine	108-78-1	Present	Active



**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
(2-methoxymethylethoxy)propanol - 34590-94-8	1.0
2-(2-ethoxyethoxy)ethyl acetate - 112-15-2	1.0

**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 contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Naphthalene - 91-20-3	Carcinogen

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Barium sulfate 7727-43-7	X	X	X
(2-methoxymethylethoxy)propanol 34590-94-8	X	X	X
Melamine 108-78-1	-	X	X
2-(2-ethoxyethoxy)ethyl acetate 112-15-2	X	-	X
Naphthalene 91-20-3	X	X	X
1,2,4 Trimethylbenzene 95-63-6	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 2	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 2	<b>Physical hazards</b> 0	<b>Personal protection</b> X

### 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

<b>Issuing Date</b>	06-Jul-2021
<b>Revision Date</b>	06-Jul-2021
<b>Revision Note</b>	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**