

# SAFETY DATA SHEET

Issuing Date 24-May-2015

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Revision Number 3

This document complies with the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

Product Name CA-40 MP, CA-40 MP DI, PIHP-200 Part B

### Other means of identification

Product Code(s) 400430, 800142

Synonyms None

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

Recommended Use Solder mask part B

Uses advised against No information available

### Supplier's details

#### Supplier Address

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

### Emergency telephone number

Emergency Telephone Number 775-885-9959

## 2. HAZARDS IDENTIFICATION

### Classification

This product is considered hazardous according to the criteria set within the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011.

Acute Oral Toxicity	Category 4
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 1B
Specific Target Organ Toxicity (Repeated Exposure)	Category 2
Flammable liquids	Category 4

### Label Elements

#### Signal Word

Danger

**Hazard Statements**

Harmful if swallowed  
Causes serious eye damage  
May cause an allergic skin reaction  
May cause genetic defects  
May cause damage to organs through prolonged or repeated exposure  
Combustible liquid.

**Physical and Health Hazards Not Otherwise Classified**

Not applicable.

**Precautionary Statements****Prevention**

- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- Contaminated work clothing should not be allowed out of the workplace.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Keep away from heat/sparks/open flames/hot surfaces - No smoking.
- Wear protective gloves/protective clothing/eye protection/face protection.

**General Advice**

- If exposed or concerned: Get medical attention/advice
- Specific treatment (see supplemental first aid instructions on this label)

**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 POISON CENTER or doctor/physician.

**Skin**

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

**Ingestion**

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- Rinse mouth.

**Fire**

- In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**Storage**

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

**Disposal**

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

**Other information****Unknown acute toxicity**

24.268% of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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	10-30	-	-
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(oxiranylmethyl)-	2451-62-9	10-30	-	-
Dipropylene glycol monomethyl ether	34590-94-8	5-25	-	-
Naphtha (petroleum), heavy aromatic	64742-94-5	0-5	-	-

### 4. FIRST AID MEASURES

#### Description of necessary first-aid measures

<b>General Advice</b>	Immediate medical attention is required.
<b>Eye Contact</b>	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if applicable, and continue flushing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

**Most Important Symptoms/Effects** Serious eye irritation or damage. Itching. Rashes. Hives. May cause allergic skin reaction.

#### Indication of immediate medical attention and special treatment needed, if necessary

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

### 5. FIRE-FIGHTING MEASURES

<b><u>Suitable Extinguishing Media</u></b>	Dry powder. Dry chemical, CO <sub>2</sub> , water spray or regular foam.
<b><u>Unsuitable Extinguishing Media</u></b>	No information available
<b><u>Specific Hazards Arising from the Chemical</u></b>	Combustible material. Vapors may travel to source of ignition and flash back. Product is or contains a sensitizer. May cause sensitization by skin contact. Burning produces obnoxious and toxic fumes.
<b>Hazardous Combustion Products</b>	Carbon oxides. Sulfur oxides. Nitrogen oxides (NO <sub>x</sub> ). Barium oxides.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	Yes.
<b>Sensitivity to Static Discharge</b>	None.
<b><u>Protective Equipment and</u></b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH

**Precautions for Firefighters** (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Pay attention to flashback. In case of insufficient ventilation wear suitable respiratory equipment.

**Environmental Precautions**

**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. See Section 12 for additional Ecological Information. Avoid release to the environment. Dispose of contents/container to an approved waste disposal plant.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up** Dam up. Take up with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Handling** Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). In case of insufficient ventilation, wear suitable respiratory equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Use only in area provided with appropriate exhaust ventilation. Keep away from heat, sparks and open flame. No smoking. Do not take internally.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep in properly labeled containers. Keep away from heat and sources of ignition. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Products** Strong oxidizing agents. Strong acids. Strong bases.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(oxiranylmethyl)- 2451-62-9	TWA: 0.05 mg/m <sup>3</sup>	-	-
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>	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust

Dipropylene glycol monomethyl ether 34590-94-8	STEL: 150 ppm TWA: 100 ppm S*	respirable fraction 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>
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m <sup>3</sup> (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m <sup>3</sup>	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Measures**                      Showers  
    Eyewash stations  
    Ventilation systems

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

**Eye/Face Protection**                      Tightly fitting safety goggles.  
**Skin and Body Protection**                Lightweight protective clothing. Impervious gloves.  
**Respiratory Protection**                    No special protective equipment required. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Hygiene Measures**                        When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Wash thoroughly after handling.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Viscous liquid.	<b>Appearance</b>	Off-white.
<b>Odor</b>	Mild Solvent.	<b>Odor Threshold</b>	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	78 °C	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

**Flammable Properties**                      Combustible material: may burn but does not ignite readily

**Explosive Properties**                        No data available

**Oxidizing Properties** No data available

**Other information**

VOC Content (%) 23  
VOC (g/l) 344

**10. STABILITY AND REACTIVITY**

**Reactivity** No data available.

**Chemical stability** Stable under recommended storage conditions.

**Possibility of hazardous reactions** None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to avoid** Heat, flames and sparks. Incompatible products.

**Incompatible materials** Strong oxidizing agents. Strong acids. Strong bases.

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides. Barium oxides. Burning produces obnoxious and toxic fumes.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Not an expected route of exposure. Harmful if inhaled.  
**Eye Contact** Causes serious eye damage.  
**Skin Contact** May cause allergic skin reaction.  
**Ingestion** Harmful if swallowed.

**Numerical measures of toxicity - Product**

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

**LD50 Oral** 347 mg/kg; Acute toxicity estimate  
**LD50 Dermal** 16768 mg/kg; Acute toxicity estimate  
**Unknown acute toxicity** 24.268% of the mixture consists of ingredient(s) of unknown toxicity.  
Acute Oral Toxicity 24.268% of the mixture consists of ingredient(s) of unknown acute oral toxicity

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,3,5-Triazine-2,4,6-(1H,3H,5H)-trione, 1,3,5-tris(oxiranylmethyl)-	= 188 mg/kg ( Rat ) = 302 mg/kg ( Rat )	-	> 0.65 mg/L ( Rat ) 4 h = 0.65 mg/L ( Rat ) 4 h
Barium sulfate	= 307000 mg/kg ( Rat )	-	-
Dipropylene glycol monomethyl ether	= 5400 µL/kg ( Rat )	= 9500 mg/kg ( Rabbit )	-
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg ( Rat )	> 2 mL/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h

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

**Symptoms** Itching. Rash Hives. Causes serious eye damage.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Eye damage/irritation** Risk of serious damage to eyes.  
**Respiratory or Skin Sensitization** May cause sensitization of susceptible persons. May cause sensitization by skin contact.

<b>Germ Cell Mutagenicity</b>	Contains a known or suspected mutagen. May cause genetic defects.
<b>Carcinogenicity</b>	Contains no ingredients above reportable quantities listed as a carcinogen.
<b>Reproductive Toxicity</b>	Based on available data, the classification criteria are not met.
<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>Target Organ Effects</b>	Respiratory system. Eyes. Central nervous system (CNS).
<b>Aspiration Hazard</b>	Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Not classified

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Dipropylene glycol monomethyl ether 34590-94-8		LC50 96 h: > 10000 mg/L static (Pimephales promelas)		LC50 48 h: = 1919 mg/L (Daphnia magna)
Naphtha (petroleum), heavy aromatic 64742-94-5	EC50 72 h: = 2.5 mg/L (Skeletonema costatum)	LC50 96 h: = 19 mg/L static (Pimephales promelas) LC50 96 h: = 2.34 mg/L (Oncorhynchus mykiss) LC50 96 h: = 1740 mg/L static (Lepomis macrochirus) LC50 96 h: = 45 mg/L flow-through (Pimephales promelas) LC50 96 h: = 41 mg/L (Pimephales promelas)		EC50 48 h: = 0.95 mg/L (Daphnia magna)

**Persistence and Degradability** No information available

### **Bioaccumulation**

Chemical Name	Log Pow
Dipropylene glycol monomethyl ether	-0.064
Naphtha (petroleum), heavy aromatic	2.9 - 6.1

**Mobility** No information available

**Other Adverse Effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Dispose of in accordance with local regulations.

**Contaminated Packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

**Note:** According to 49 CRF §173.150(f)(1), this material should be reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk.

**DOT** Not regulated

**TDG** Not regulated

<u>MEX</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

## 15. REGULATORY INFORMATION

### International Regulations

<b>Ozone depleting substances</b>	Not applicable
<b>Persistent Organic Pollutants</b>	Not applicable
<b>Hazardous Waste</b>	Not applicable
<b>The Rotterdam Convention (Prior Informed Consent)</b>	Not applicable
<b>International Convention for the Prevention of Pollution from Ships (MARPOL)</b>	Not applicable

### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>European Union</b>	Complies

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

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

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

### U.S. Federal Regulations

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	CAS-No	Weight %	SARA 313 - Threshold Values %
Diethylene glycol monoethyl ether acetate	112-15-2	1-5	1.0

### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

### 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.

### U.S. State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Naphthalene	91-20-3	Carcinogen



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

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(oxiranylmethyl)-	X				
Barium sulfate	X	X	X		
Dipropylene glycol monomethyl ether	X	X	X	X	X
Diethylene glycol monoethyl ether acetate	X		X	X	
Naphthalene	X	X	X	X	

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

**NFPA** Health Hazard 3 Flammability 2 Instability 0 Physical and Chemical Hazards -

**HMIS** Health Hazard 3\* Flammability 2 Physical Hazard 0 Personal Protection X

\*Indicates a chronic health hazard.

**Prepared By** Product Stewardship  
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**Revision Date** 02-Feb-2019  
**Revision Note** Added product name in section 1

**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**