

# SAFETY DATA SHEET

Issuing Date 28-Aug-2015

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Revision Number 0

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

### GHS product identifier

Product Name CA-40 AUS320

### Other means of identification

SDS Number MS-00262800-US00

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

#### **Manufacturer Address**

TAIYO INK MFG. CO., Ltd.  
900 Hirasawa, Ranzan-machi, Hiki-gun, Saitama,  
355-0215 Japan  
TEL: 81-493-61-2724

### Emergency telephone number

Emergency Telephone Number 81-493-61-2724

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Carcinogenicity	Category 2

### GHS Label elements, including precautionary statements

### Emergency Overview

#### **Signal Word**

#### **Warning**

#### **Hazard Statements**

- Causes skin irritation
- Causes serious eye irritation
- May cause an allergic skin reaction
- Suspected of causing cancer

**Appearance** Cream**Physical State** Paste.**Odor** Mild**Precautionary Statements****Prevention**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- Wash face, hands and any exposed skin thoroughly after handling.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Contaminated work clothing should not be allowed out of the workplace.
- 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.
- If eye irritation persists: Get medical advice/attention.

**Skin**

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

**Storage**

- Store locked up.

**Disposal**

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

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

Harmful to aquatic life with long lasting effects

29.7% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %	Trade secret
Barium sulfate	7727-43-7	30-40	*
Formaldehyde, polymer with (chloromethyl) oxirane and phenol	9003-36-5	20-30	*
4,4'-Bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethyl (1,1'-biphenyl)	85954-11-6	20-30	*
Dipropylene glycol monomethyl ether	34590-94-8	5-10	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES

### Description of necessary first-aid measures

<b>General Advice</b>	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. 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>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. If symptoms persist, call a physician.
<b>Protection of First-aiders</b>	Use personal protective equipment.

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

**Most Important Symptoms/Effects** May cause allergic skin reaction. Eye irritation/reactions. Skin irritation

### 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

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** No information available.

### Specific Hazards Arising from the Chemical

May cause sensitization by skin contact.

#### Explosion Data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (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. Keep people away from and upwind of spill/leak.

### 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. Prevent entry into waterways, sewers, basements or confined areas. Avoid release to the environment. Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information.

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

## 7. HANDLING AND STORAGE

**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.

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

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

**Incompatible Products**

Strong oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable fraction, 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
Dipropylene glycol monomethyl ether 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>

*Immediately Dangerous to Life or Health. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH:*

**Other Exposure Guidelines**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls****Engineering Measures**

Showers  
Eyewash stations  
Ventilation systems

**Individual protection measures, such as personal protective equipment**
**Eye/Face Protection**  
**Skin and Body Protection**  
**Respiratory Protection**

Safety glasses with side-shields.  
Lightweight protective clothing. Impervious gloves.  
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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

Physical State Odor	Paste. Mild.	Appearance Odor Threshold	Cream. No information available.
<b>Property</b>	<b>Values</b>	<b>Remarks/ - Method</b>	
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	103 °C / 217.4 °F	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	
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	Not flammable		
Explosive Properties	No data available		
Oxidizing Properties	No data available		

**Other information**

VOC Content (%) 13.4

**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**

Incompatible products.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides. Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	There is no data available for this product.
<b>Eye Contact</b>	Causes serious eye irritation.
<b>Skin Contact</b>	Causes skin irritation. May cause allergic skin reaction
<b>Ingestion</b>	There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formaldehyde, polymer with (chloromethyl) oxirane and phenol	> 2 g/kg ( Rat )	> 400 mg/kg ( Rat )	-
Dipropylene glycol monomethyl ether	= 5230 mg/kg ( Rat )	= 9500 mg/kg ( Rabbit )	-

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

**Symptoms** No information available.

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

**Sensitization** May cause sensitization of susceptible persons. May cause sensitization by skin contact.  
**Mutagenic Effects** No information available.  
**Carcinogenicity** Contains no ingredients above reportable quantities listed as a carcinogen.

**Reproductive Toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Chronic Toxicity** Avoid repeated exposure. Repeated contact may cause allergic reactions in very susceptible persons.  
**Aspiration Hazard** No information available.

### Numerical measures of toxicity - Product

**Acute Toxicity** 29.7% of the mixture consists of ingredient(s) of unknown toxicity.

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

**LD50 Oral** 39037 mg/kg; Acute toxicity estimate  
**LD50 Dermal** 113060 mg/kg; Acute toxicity estimate mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

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)

**Persistence and Degradability** No information available.

### Bioaccumulation

Chemical Name	Log Pow
Dipropylene glycol monomethyl ether	-0.064

### Other Adverse Effects

No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Dispose of in accordance with federal, state, and local regulations

**Contaminated Packaging** Do not re-use empty containers.

#### 14. TRANSPORT INFORMATION

**DOT** Not regulated

#### 15. REGULATORY INFORMATION

##### International Inventories

**TSCA** Complies  
**DSL** Does not comply  
**AICS** Does not comply

##### Legend

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

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

##### 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	5-10	1.0

##### SARA 311/312 Hazard Categories

**Acute Health Hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** 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 does not contain any Proposition 65 chemicals.

##### 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
Diethylene glycol monoethyl ether acetate	X		X	X	

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazard</b> 2	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Physical and Chemical Hazards -</b>
<b>HMIS</b>	<b>Health Hazard</b> 2	<b>Flammability</b> 1	<b>Physical Hazard</b> 0	<b>Personal Protection</b> X

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**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**