



MATERIAL SAFETY DATA SHEET

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DATE PREPARED: 04/25/2007

MSDS No: ca41wl07

CA-41 WL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: CA-41 WL

Product Description: Epoxy Solder Mask Hardener

Product Name: CA-41 WL

MANUFACTURER:

Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701

24 HR. EMERGENCY TELEPHONE NUMBERS:

Emergency Contact: Phillip Harrison
Emergency Phone 775-885-9959

2. COMPOSITION/INFORMATION ON INGREDIENTS

	wt. %	CAS Registry #
Diethylene Glycol Monoethyl Ether Acetate	1 - 2	112 -15-2
Heavy Aromatic Naphtha (petroleum)	6 - 7	64742 -94-5
Dipropylene Glycol Monomethyl Ether	6 - 7	034590-94-8
Naphthalene	<0.6	91-20-3
Epoxy Resin (Trade Secret)	28 - 29	
Acrylate Resin (Trade Secret)	19 - 21	

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	Supplier
Dipropylene Glycol Monomethyl Ether	100 ppm	100 ppm	
Naphthalene	10 ppm	Skin	

COMMENTS:

Naphthalene is a component of Heavy Aromatic Naphtha Solvent (CAS# 64742-94-5)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:

Light cream colored viscous liquid with mild odor.

POTENTIAL HEALTH EFFECTS

EYES:

May cause irritation of the eyes

SKIN:

May cause skin irritation.

May cause skin sensitization, an allergic reaction, which becomes evident upon reexposure to this material.

INGESTION:

This product may be slightly toxic. Swallowing may cause nervous system effects, based on animal studies of one ingredient.

INHALATION:

May cause respiratory tract irritation.

High vapor concentrations may cause headaches, dizziness and nausea.

ACUTE EFFECTS:

Symptoms of overexposure (ingestion, inhalation, skin contact) include: stomach or intestinal upset (vomiting, nausea, diarrhea), irritation of nose, throat and airways.

SUBCHRONIC/CHRONIC TOXICITY

CHRONIC:

Prolonged or repeated contact can result in drying of the skin which may result in skin irritation and dermatitis (rash).

CARCINOGENICITY:

Naphthalene

NTP - "Reasonably Anticipated to be a Human Carcinogen"

IARC - "Possibly Carcinogenic to Humans" (Group 2B)

MUTAGENICITY:

Animal studies of one component in the soldermask have shown mixed results, indicating over-exposure may cause toxic effects to the testes, possible liver and lung effects and possible male reproductive effects. The impact on humans has not been established.

4. FIRST AID MEASURES

EYES:

Immediately flush eyes with plenty of water for 15 minutes. Get medical attention if irritation persists.

SKIN:

Wash skin with soap and plenty of water.

INGESTION:

Do not induce vomiting. Give milk or water.

INHALATION:

If breathing becomes difficult, remove to fresh air.

If symptoms persist give oxygen and seek medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: ~172°F 78°C SETA Flash CC

FLAMMABLE CLASS:

OSHA: Combustible

DOT: Combustible

GENERAL HAZARD:

The Uniform Fire Code flammability rating for this product is: Class III-A Combustible Liquid.

If burning, this material may produce hazardous fumes or hazardous decomposition products.

EXTINGUISHING MEDIA:

Use carbon dioxide, foam, dry chemical or water spray when fighting fires involving this material.

HAZARDOUS COMBUSTION PRODUCTS:

Combustion products may be toxic. May produce various carbon oxides and hydrocarbons.

EXPLOSION HAZARDS:

Sealed containers may build up pressure and rupture when exposed to high heat (fire).

FIRE FIGHTING PROCEDURES:

Remove sealed containers from the vicinity of the fire.

Use normal fire fighting procedures for burning liquids.

FIRE FIGHTING EQUIPMENT:

Use self-contained breathing apparatus with full facepiece operated in the positive pressure mode with appropriate turn-out gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Absorb the spilled material with inert material. Scrub the area with detergent and water.

ENVIRONMENTAL PRECAUTIONS:

WATER SPILL:

Contain, minimize dispersion and collect as soon as possible.

LAND SPILL:

Prevent from entering drain, sewer, stream or other bodies of water.

SPECIAL PROTECTIVE EQUIPMENT:

Protective eyewear, impervious gloves, air purifying respirator recommended.

7. HANDLING AND STORAGE

HANDLING:

Avoid contact with skin, eyes and clothing. Use only with adequate ventilation.

STORAGE:

Store in a cool place in original container away from sunlight and heat.
Recommended storage below 68 F (20 C) to help maintain shelf life.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Good general mechanical ventilation recommended.

PERSONAL PROTECTION

EYES AND FACE:

Wear safety glasses with side shields, goggles or face shield to prevent splashes into the eyes.

SKIN:

In general avoid skin contact. Wear impervious gloves.

RESPIRATORY:

Not necessary for adequately ventilated work area.

PROTECTIVE CLOTHING:

As necessary to avoid contact with skin.

WORK HYGIENIC PRACTICES:

Wash hands with soap and water after using material. Do not use solvent to remove product from skin.

OTHER USE PRECAUTIONS:

This product contains inorganic fillers. In normal use as a liquid soldermask the inorganic fillers are not hazardous. Dust from sanding, drilling or routing of the cured soldermask may pose an inhalation hazard.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Odor: Organic solvent odor
Appearance: Cream colored viscous liquid
Percent Volatile: 14- 19
Vapor Pressure: <2.00 mmHg
Vapor Density: ~4.7-6.1 (Air = 1)
Solubility in Water: <9
Evaporation Rate: <0.1 (n-Butyl Acetate=1)
Specific Gravity: ~1.6 (water=1)
(VOC): 230 to 240

COMMENTS:

Percent Volatile: Listed as percent weight.
VOC g/l is a calculated value based on component data.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY:

This product is stable under normal operating conditions

CONDITIONS TO AVOID:

Avoid high temperatures and sunlight.

HAZARDOUS DECOMPOSITION:

Normal decomposition products.

INCOMPATIBLE MATERIALS:

Oxidizers, peroxides, strong acids and bases, amines and active epoxy curing agents.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS:

No specific toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS:

No specific environmental data is available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

Dispose of in accordance with all Federal, State and Local regulations.
Keep out of sewers and waterways.

RCRA/USPA WASTE INFORMATION:

Waste material not RCRA regulated

14. TRANSPORT INFORMATION

SPECIAL SHIPPING NOTES:

Not DOT regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 Reportable Ingredients: Diethylene Glycol Ethyl Ether Acetate, Naphthalene

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Status: This product complies with all applicable rules and orders under TSCA.

RCRA STATUS:

Waste material is not RCRA regulated.

CANADA

CANADIAN ENVIRONMENTAL PROTECTION ACT:

All intentional components of this product are listed on the DSL or NDSL.

16. OTHER INFORMATION

Approval date: 05/02/2007

REVISION SUMMARY

New MSDS

HMIS CODES

Fire: 2 Health: 1 Reactivity: 2

MANUFACTURER SUPPLEMENTAL NOTES:

This product contains no environmentally restricted substances as listed in Sony Technical Standard SS-00259 fifth edition.

MANUFACTURER DISCLAIMER:

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.
