

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT NAME	: H9890-6
RECOMMENDED USE OF THE CHEMICAL AND ANY RESTRICTIONS ON USE	: Formulated Material for Electronic Device Manufacturing : Industrial use only (See Section 15 & 16 for additional restrictions, if any)
NAME OF MANUFACTURER	: NAMICS CORPORATION
NAME OF SECTION	: Upstream Management GROUP
ADDRESS	: 3993, Nigorikawa, Kita-ku, Niigata-City 950-3131, Japan
TELEPHONE	: 81-25-258-5577
FAX	: 81-25-258-5511
DISTRIBUTOR/IMPORTER	: NAMICS TECHNOLOGIES INC.
ADDRESS	: 2055 Gateway Place, Suite 480, San Jose, CA, USA 95110
TELEPHONE	: 1-408-516-4611
FAX	: 1-408-516-4617

## 2. HAZARD IDENTIFICATION

### GHS CLASSIFICATION

#### Health Hazards

Serious eye damage/eye irritation	: Category 2A
Sensitisation, skin	: Category 1
Toxic to reproduction	: Category 2
Specific target organ toxicity, single exposure	: Category 1 (Respiratory system)
Specific target organ toxicity, repeated exposure	: Category 1 (Eye, Respiratory organs)

Any hazard class not listed above is out of classification or not able to classify.

### GHS LABEL ELEMENT

#### PICTOGRAMS



#### SIGNAL WORDS

Danger

#### HAZARD STATEMENTS

- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H361 Suspected of damaging fertility or the unborn child
- H370 Causes damage to organs (Respiratory system)
- H372 Causes damage to organs (Eye, Respiratory organs) through prolonged or repeated exposure

#### PRECAUTIONARY STATEMENTS

- Use with adequate protection equipment to avoid contact with skin, mucosa, eyes or clothing.
- If chemicals get into eyes, rinse the affected eyes immediately with clean plenty of running water for at least 15 minutes.
- Remove all chemicals from contact with victim's eyes, including under the eyelids, arrange for transport to the nearest medical facility for examination by a physician as soon as possible.
- If chemicals contaminate skin, wash the affected areas using a large amount of water and soap or shampoo for skin.
- If victim's appearance has changed or the victim has pain, arrange for transport to the nearest medical facility for examination by a physician.

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If accidentally swallowed and became feeling ill, keep the victim quiet and arrange for transport to the nearest medical facility for examination by a physician as soon as possible.

If inhaled vapour or gasses and the victim remove from the contamination to fresh air and arrange for transport to the nearest medical facility.

If chemicals have specified storage conditions such as storage in a cool and dark place, you must comply with it.

Dispose in accordance with all applicable regulations.

See Section 11 for additional toxicological information.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE : MIXTURE  
 PRODUCT FAMILY : Conductive material

#### CHEMICAL INGREDIENTS

COMPONENT	CAS No.	%*
Silver	7440-22-4	75~85
Resins	trade secret	5~10
Additives	trade secret	<5
High-boiling solvent	trade secret	5~15
Acetic Acid	64-19-7	<1

\*A trade secret is claimed where noted regarding specific chemical identity, and a trade secret is claimed as to exact percentage (concentration) of composition where ranges are provided.

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### 4. FIRST-AID MEASURES

#### INHALATION

Remove the victim from the contamination immediately to fresh air.

If breathing is weak, irregular or has stopped, open victim's airway, loosen victim's collar and belt and administer artificial respiration.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

#### SKIN CONTACT

Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible, cutting them off if necessary.

Wash the affected areas under tepid running water using a mild soap.

If irritation persists, arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

#### EYE CONTACT

Gently rinse the affected eyes, including under the eyelids, with clean water for at least 15 minutes.

Remove all chemicals from contact with the victim's eyes immediately.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

#### INGESTION

Keep the victim warm and quiet.

Do not give an unconscious person anything to drink.

Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

If the victim stops breathing, wipe away any remaining material off the lips and clear the airway and administer artificial respiration.

#### SYMPTOMS

See Section 11.

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## 5. FIRE-FIGHTING MEASURES

### SPECIFIC HAZARD WITH REGARD TO FIRE-FIGHTING MEASURES

Firefighters should wear proper protective equipment.  
Shut off all sources of ignition; No flares, smoking or flames in area.

### EXTINGUISHING MEDIA

Dry chemical powder, foam or carbon dioxide.

### SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Toxic fumes of Carbon monoxide, Carbon dioxide, Nitrogen oxides.

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## 6. ACCIDENTAL RELEASE MEASURES

Shut off all sources of ignition; No flares, smoking or flames in area.  
Wear proper protective equipment.  
Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.  
For large spills, dike for later disposal.

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## 7. HANDLING AND STORAGE

### HANDLING

Avoid contact by the uncured product with skin, eyes or mucous membranes.  
Avoid inhalation of vapors, mists from curing of the material, or dusts from sanding or cutting of the cured product.  
Do not ingest.  
Use only in the well-ventilated areas.  
Keep container tightly closed.  
Prevent build-up of electrostatic charges (e.g., by grounding and bonding).  
Use reduced-sparking hand-tools.

### STORAGE

Store in a freezer.  
Avoid long storage periods since the product degrades with age.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### CONTROL PARAMETERS

No OSHA PEL or ACGIH TLV has been established for this product.  
Exposure should be minimized by engineering controls and appropriate personal protective equipment.

### ENGINEERING MEASURES

Prevent vapor buildup by providing adequate ventilation during and after use.

### PERSONAL PROTECTIVE EQUIPMENT

#### RESPIRATORY PROTECTION

Use respiratory protection when workplace hazards warrant the use of a respirator.  
Appropriate respirators must be used in accordance with a program that follows 29 CFR 1910.134.

#### EYE PROTECTION

Chemical goggles or equivalent eye protection if exposure to uncured resin could occur.

#### HAND, SKIN AND BODY PROTECTION

Use skin protection, including impervious gloves and clothing that covers arms, legs, face and torso to prevent contact with the uncured resin, dust or mist.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STAGE	
FORM	: Viscous liquid
COLOR	: Black
ODOR	: Characteristic odor
DENSITY	: 4.0 g/cm <sup>3</sup>
BOILING POINT	: 245 degrees C
MELTING POINT	: Not available
VAPOR PRESSURE	: Not available
SOLUBILITY IN WATER	: Insoluble
SOLUBILITY IN ORGANIC SOLVENTS	: Soluble

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**10. PHYSICAL HAZARD (STABILITY AND REACTIVITY)**

FLASH POINT	: 129 degrees C (Flash point of the constituent)
AUTOIGNITION TEMPERATURE	: Higher than 200 degrees C
STABILITY	: Product is considered stable.
REACTIVITY	: Reaction at high temperature
CONDITIONS TO AVOID	: Excessive overheating
INCOMPATIBILITY	: Oxidizing agents
DECOMPOSITION PRODUCTS	: Toxic fumes of Carbon monoxide, Carbon dioxide, Nitrogen oxides.

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**11. TOXICOLOGICAL INFORMATION**

## COMPONENT OF THIS PRODUCT

## ACUTE TOXICITY

High-boiling solvent	: Oral LD50 (rat) 1400 mg/kg
Acetic Acid	: Oral LD50 (rat) 3310 mg/kg

## THIS PRODUCT

Although this product has not been tested as a whole, generally available information indicates that epoxy resins may cause skin irritation and, in some cases, allergic skin reactions. Similarly, information regarding exposure to epoxy resins and the vapors and fumes from epoxy resins, indicates that they may cause irritation of the respiratory tract and the eyes, and allergic respiratory responses in some individuals. Symptoms of adverse effects include:

- Redness, swelling, rash and/or irritation for exposure to skin, eyes, mucous membranes and lungs;
- Coughing or shortness of breath for exposure to respiratory tract; and
- Discomfort or irritation to GI tract if swallowed.

Employees with pre-existing eye, skin, mucous membrane or respiratory disorders, such as a history of skin or respiratory allergies, rashes, or diseases involving impaired respiratory function (e.g., asthma) may be more susceptible to the effects of exposure to epoxy resins. Consult a physician for additional guidance in dealing with these special situations.

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**12. ECOLOGICAL INFORMATION**

No relevant information found.

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**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all applicable regulations.

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**14. TRANSPORT INFORMATION**

Follow all regulations in your country.

International regulations : based on IMO / ICAO / IATA.

UN CLASS	: Not applicable
PACKING GROUP	: Not applicable
UN NUMBER	: Not applicable
Proper shipping name	: Not applicable
Marine Pollutant	: Not applicable

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**15. REGULATORY INFORMATION**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

This product contains the following EPCRA section 313 chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 373):

<u>COMPONENT</u>	<u>CAS No.</u>	<u>%</u>
Silver	7440-22-4	75~85

Follow all regulations in your country.

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**16. OTHER INFORMATION****REFERENCE**

1. Material Database for Safety Data Sheet  
Japan Paint Manufacturers Association
2. Guidebook on the preparation of Safety Data Sheet & Labelling in conformity with GHS  
Japan Paint Manufacturers Association
3. 13901 chemical products  
The Chemical Daily Co., Ltd.
4. Safety Data Sheet of raw material manufacturer

This product is for industrial or commercial applications. This product is not intended for use by the general public.

The information herein is given in good faith, but no warranty, express or implied, is made.  
All materials may present unknown hazards and should be used in caution.

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