

Safety Data Sheet

Issue date: December 8, 2018

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1. CHEMICAL SUBSTANCE AND COMPANY IDENTIFICATION

Name of Chemical Substance	Copper paste WA-001A
Company Name	Watanabe Industry Co., Ltd.
Address	1511-25 Nishiyama-Cho, Nishi-Ku, Hamamatsu-city, Shizuoka Prefecture
Department in Charge	Engineering Department
Telephone Number	053-485-5217
FAX Number	053-485-5217

2. HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazards	Flammable liquid	Not classified
Health hazards	Acute toxicity (oral)	Classification not possible
	Acute toxicity (percutaneous)	Classification not possible
	Acute toxicity (inhalation)	Classification not possible
	Skin corrosion/irritation	Category 2
	Serious eyes damage /Eyes irritation	Category 2A
Environmental hazard	Skin sensitization	Category 1
	Aquatic environmental toxicity (acute)	Category 2
	Aquatic environmental toxicity (long term)	Category 3

※Items not listed above are either not applicable, not classified or classification not possible.

Label element

Pictogram or symbol



Warning statements	• Warning
Hazard statement	• Skin irritation
	• Strong eye irritation
	• May cause allergic skin reaction
	• Toxic to aquatic life
	• Harmful to aquatic life due to long-term effects

Notes

【Safety measures】	<ul style="list-style-type: none"> • Do not inhale dust/smoke/gas/mist/vapor/spray • Wash thoroughly after handling • Wear protective gloves, protective clothing, eye protection and face protection. • Avoid inhaling dust/smoke/gas/mist/vapor/spray • Do not take contaminated clothing outside of work area. • Avoid release into the environment.
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- 【Emergency measures】**
- If in contact with skin: wash with plenty of water and soap.
 - If skin irritation occurs: Consult a medical doctor and receive treatment.
 - Remove contaminated clothes, wash when reusing.
 - If in contact with eyes: Wash carefully with water for several minutes. If wearing contact lenses and they can be easily removed, remove them. Keep washing after that.
 - If eye irritation remains: Consult a medical doctor and receive treatment.
 - Wash when reusing contaminated clothing.
- 【Disposal】**
- Entrust the contents and container to a professional waste disposal contractor licensed by the prefectural governor.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Single or mixed product: Mixed

Chemical name: Mixture of Bisphenol A liquid epoxy resin

The Chemical Substances Control Law (CSCL) Number.

(7)-1283 others

CAS Number

25068-38-6 others

Hazardous chemical products:

<u>Chemical name or general name:</u>	<u>Content (%)</u>	<u>CSCL No.</u>	<u>CAS Number</u>
Bisphenol A liquid epoxy resin	15	(7)-1283	25068-38-6

<u>PRTR Law (No.)</u>	<u>Substances subject to notification by Industrial Safety and Health Act</u>
Not applicable	-

*The above content value is a representative value and does not guarantee the standard.

4. FIRST AID MEASURES

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|--|--|
| In case of inhalation | <ul style="list-style-type: none"> • Promptly move to a location with fresh air and make rest in a posture that facilitates breathing. |
| In case of contact with skin | <ul style="list-style-type: none"> • Wash with plenty of water and soap. • If skin irritation occurs, seek medical advice and treatment. • Take off contaminated clothing and wash it in case of reuse. • Wash contaminated clothing before reuse. |
| In case of contact with eyes | <ul style="list-style-type: none"> • Carefully wash with water for a few minutes. Then, Remove contact lenses if easily removable. Continue washing once removed. • If eye irritation persists, get medical attention. |
| In case of swallowing | <ul style="list-style-type: none"> • Contact your doctor if you feel unwell. |
| Protection for those who take first-aid measures | <ul style="list-style-type: none"> • Wear protective equipment such as protective gloves and |

protective goggles, and be careful not to get it on your clothes or hands.

5. FIRE-FIGHTING MEASURES

- Extinguishing media
- Small fire: Dry chemicals extinguisher, carbon dioxide, or dry sand
 - Major fire: Dry chemicals extinguisher, carbon dioxide, alcohol-resistant foam fire extinguisher, or spray water
- Prohibited media
- Straight stream
- Specific hazards with regard to fire-fighting
- Fire may generate stimulus, or toxic gases.
 - The container may explode by heat.
- Specific methods of fire-fighting
- Move container from fire area if it can be done without risk.
 - If it cannot be moved, cool it down by spray water on the container or surroundings.
 - For the fire, there is a risk of explosion due to temperature rise, so take enough distance to effectively extinguish the fire.
- Protection for firefighters
- Fighters should wear chemical protective clothing and respirator.
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6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions / Protective Equipment and Emergency Measures
- Immediately isolate by an appropriate distance in all directions as a leakage zone.
 - Keep unauthorized personnel away.
 - The person carrying out the deed should wear proper protective equipment (Reference "8. EXPOSURE CONTROL / PERSONAL PROTECTION") and should avoid eye or skin contact and gas inhalation.
 - Extinguish the fire from the upwind side.
- Environmental Precautions
- In order not to affect the environment, do not allow the product to discharge into any rivers, streams, etc.
- Collection and Neutralization
- Absorb using dried dirt, sand, or incombustible substance or cover and move to a container.
 - In the case of large amounts, surround spilled product with piled up soil in order to prevent run off and dispose after guiding it to a safe location.
- Containment and Cleaning Measure / Materials
- Stop leak if possible without personal risk.
- Preventative Measures for a Secondary Accident
- Quickly remove all ignition sources (do not smoke, spark, or make flames within the vicinity)
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7. HANDLING AND STORAGE PRECAUTIONS

Handling:

[Technical measures]

Take the equipment measures outlined in “8. EXPOSURE PREVENTION AND PROTECTIVE MEASURES” and wear protective clothing.

[Local and General Ventilation]

Follow “EXPOSURE PREVENTION AND PROTECTION MEASURES” to ensure local and general ventilation.

[Precautions for Safe Use]

- Do not inhale dust, smoke, gas, mist, vapor, or spray.
- Wash hands thoroughly after use.
- Wear protective gloves, protective clothing, eye protection, and face protection.
- Avoid inhaling dust, smoke, gas, mist, vapor, or spray.
- Do not remove contaminated clothing from work area.
- Avoid release into the environment..

[Contact Prevention]

- Refer to “10. STABILITY AND REACTIVITY” .

Storage:

[Technical measures]

- The storage area should be equipped with lighting, illumination, and ventilation equipments necessary for storing and handling hazardous materials.

[Incompatible Materials]

- Refer to “10. STABILITY AND REACTIVITY” .

[Storage Conditions]

- Store as specified in the Fire Service Act
- Store away from ignition sources such as heat, sparks, and open flames. No smoking.

[Container and Packaging Material]

- Put in an airtight, unbreakable container.
- Uses containers specified by the Fire Service Act

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Controlling concentration	Not set
Acceptable Concentration	
Japan Society for Occupational Health	Not set
ACGIH (TLV-TWA)	Not set
Protective equipment	
Respiratory protection	Dust protective mask or gas mask for organic gas
Hand protection	Rubber protective gloves or disposable gloves made of

	polyethylene.
Eye protection	Eyeglasses with side plates or protective goggles.
Skin and body protection	Wear long-sleeved clothing. Wear boots, and an oil-resistant apron and arm covers made of oil-synthetic resin or rubber as needed.
Hygiene measures	None in particular

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	• Brown liquid
Odor	• Nearly odorless
pH	• No data
Melting point / freezing point	• No data
Boiling point, initial point, and boiling range	• No data
Flash point	• >200°C (Cleveland open-cup flash point test)
Explosive range	• No data
Vapor pressure	• No data
Vapor density	• No data
Specific gravity	• 4.01 (25°C)
Solubility	• No data
Octanol / water partition coefficient	• No data
Autoignition temperature	• No data
Decomposition temperature	• No data
Viscosity	• Paste

10. STABILITY AND REACTIVITY

Stability	• Stable under normal handling conditions.
Possibility of hazardous reactions	• It has an active epoxy origin, self-polymerizes at high temperatures, and easily reacts with activated water compounds.
Conditions to avoid	• High temperature heating, contact with contact dangerous substances, flame.
Incompatible materials	• Strong oxidizing agents, strong Lewis acid, strong inorganic acid, strong inorganic base, organic base (especially 1st and 2nd grade aliphatic amines)
Hazardous decomposition products	• No data.

11. TOXICOLOGICAL INFORMATION

Acute toxicity (oral)	• No data
Acute toxicity (percutaneous)	• No data
Acute toxicity (inhalation)	• No data
Skin corrosion / irritation	• Skin irritation
Serious eye damage / eye irritation	• Intense eye irritation
Respiratory sensitization	• No data
Skin sensitization	• Can cause allergic skin reaction

Germ cell mutagenicity	• No data
Carcinogenicity	• No data
Reproductive toxicity	• No data
Specific target organs / systemic toxicity (single exposure)	• No data
Specific target organ / systemic toxicity (repeated exposure)	• No data
Respiratory hazard from inhalation	• No data

12. ECOLOGICAL INFORMATION

Acute toxicity to the aquatic environment:	• Toxic to aquatic organisms
Aquatic environmental hazard:	• Harmful to aquatic organisms in the long term
Hazard to the ozone layer:	• Does not contain any of the controlled substances listed in the Annex of the Montreal Protocol at a concentration of 0.1% or higher.

13. DISPOSAL CONSIDERATIONS

Residual waste	<ul style="list-style-type: none"> • For disposal, follow related laws and local government standards. • If an industrial waste treatment company with permission from the prefectural governor, etc. or a local government is handling the disposal, entrust the disposal to them. • When entrusting the disposal of waste, fully inform the disposal companies of the dangers and hazards before entrusting the disposal.
Contaminated containers and packaging	<ul style="list-style-type: none"> • When disposing of an empty container, dispose of it after completely removing the contents. • Entrust the contents and containers to a specialized waste disposal company licensed by the prefectural governor.

14. TRANSPORT INFORMATION

International Regulations	<ul style="list-style-type: none"> • Follow the marine regulations stipulated by IMDG (International Maritime Dangerous Goods Code) • Follow the aviation regulations stipulated by IATA (International Air Transport Association Dangerous Goods Regulations)
UN Classification	• Not applicable
United Nations Number:	• Not applicable
Name of Article (UN Transport Name)	• —
Container Class	• —
Domestic Regulations	• Observe the "15. APPLICABLE LAWS".
Special Safety Measures	<ul style="list-style-type: none"> • Load dangerous goods in a manner such that the concerned dangerous goods and/or the transporting vessel will not fall, overturn, or break. • Transport dangerous goods and/or the transporting vessel in a manner that will not cause significant friction or vibration. • In the case that there is the risk of an accident such as significant leakage of dangerous goods during transport, take emergency

measures to prevent the accident and report the situation to the fire department or other related institution.

- When transporting, avoid direct sunlight and stack the containers in a manner such that they will not become damaged, corrode, or leak. Take measure to prevent the collapse of cargo.
- Do not transport together with foodstuff or feed.

15. APPLICABLE LAWS

Fire Service Act

Non-hazardous materials, designated flammable goods (category of flammable liquid)

Industrial Safety and Health Act

Existing chemical substances with mutagenicity (Article 57-5 of the Labour Standards Bureau of Ministry of Health, Labour and Welfare Notification)

- Bisphenol A liquid epoxy resin

Chemical Substances Control Law

Priority Assessment Chemical Substances

- [Bisphenol A liquid epoxy resin]

Labor Standards Act

Disease-causing chemical substances

(Article 75-2, Article 35 of the Ordinance for Enforcement of the Labor Standards Act, Appended Table 1-2, subparagraph 4-1, the Ministry of Health, Labour and Welfare Notification No. 36, 1978)

- [Bisphenol A liquid epoxy resin]

Marine Pollution Control Act

- Bisphenol A liquid epoxy resin (Class X substances)

16. OTHER INFORMATION

References

- 1) Notification of the three ministries (Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, Ministry of the Environment Inter-Ministerial Meeting on GHS: NITE HP)
- 2) Japan Chemical Industry Association (Emergency Response Guidebook, the Container Yellow Card labeling system)
- 3) Other companies' SDSs.

*The contents of the documents are based on the materials, information, and data available at this time. The documents do not by any means guarantee the amount of the contents, physicochemical properties, or hazardous/toxicological information. Since these precautions are intended for normal handling, in a case of a special use, take appropriate safety measures according to the purpose and usage.