Safety Data Sheet

Issue date: December 8, 2018
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1. CHEMICAL SUBSTANCE AND COMPANY IDENTIFICATION

Name of Chemical Substance	Hardener WA-001B
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)	Category 4
	Acute toxicity (percutaneous)	Category 3
	Acute toxicity (inhalation)	Classification not possible
	Skin corrosion/irritation	Category 1
	Severe eye damage/eye irritation	Category 1
	Skin sensitization	Category 1
Environmental hazard	Aquatic environmental toxicity (acute)	Classification not possible
	Aquatic environmental toxicity (long term)	Classification not possible

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

Label element

Pictogram or symbol

Warning statements
- Hazard

Hazard statement
- Toxic when swallowed
- Toxic when in contact with skin
- Severe skin damage/eye damage
- Severe eye damage
- May cause allergic skin reaction.

Notes

【Safety measures】
- Wash thoroughly after handling
- Do not eat, drink or smoke when using this product.
- Wear protective gloves, protective clothing, eye protection and face protection.
- Do not inhale dust/smoke/gas/mist/vapor/spray
- Avoid inhaling dust/smoke/gas/mist/vapor/spray
- Do not take contaminated clothing outside of work area.

【Emergency measures】 ・If swallowed: If you feel unwell, consult a medical doctor and receive treatment.
・Wash when reusing contaminated clothing.
・If in contact with skin: wash with plenty of water and soap.
・If swallowed: Rinse mouth. Do not force vomiting.
・If in contact with skin (hair): Immediately remove all contaminated clothing. Rinse skin with running water or shower.
・If inhaled: Move to a place with fresh air and rest with a posture that makes easy to breathe.
・In case of contact with skin : Get medical attention.
・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.
・If skin irritation occurs: Consult a medical doctor and receive treatment.

【Storage】 ・Lock and store.

【Disposal】 ・Entrust the contents and container to a professional waste disposal contractor licensed by the prefectural governor.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Single or mixed product: Mixed
Chemical name: Polyamines (liquid) (corrosive)
The Chemical Substances Control Law (CSCL) Number. (7)-1283 others
CAS Number 25068-38-6 others

Hazardous chemical products:

Chemical name or general name:	Content (%)	CSCL No.	CAS Number
Modified aliphatic polyamine	>50		

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

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

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4. FIRST AID MEASURES

In case of inhalation ・Promptly move to a location with fresh air and make rest in a posture that facilitates breathing.

In case of contact with skin ・Wash contaminated clothing before reuse.
・Wash with plenty of water and soap.
・Take off immediately contaminated clothing. Rinse

skin with running water or shower.
・Get medical attention.
・If skin irritation occurs, seek medical advice and treatment.

In case of contact with eyes
・Carefully wash with water for a few minutes. Then, Remove contact lenses if easily removable. Continue washing once removed.
・Get medical attention.

In case of swallowing
・Contact your doctor if you feel unwell.
・Rinse mouth. Do not induce vomiting.

Protection for those who take first-aid measures
・Wear protective equipment such as protective gloves and protective goggles, and be careful not to get it on your clothes or hands.

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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.
・If you are not wearing the proper protective clothing, do not touch any damaged container or leaked substance.
・Extinguish the fire from the upwind side.
・Distance from lowland.

・Ventilate the sealed area.

Environmental Precautions

・In order not to affect the environment, do not allow the product to discharge into any rivers, streams, etc.

・Do not release product into the environment.

Collection and Neutralization

・Absorb using dried dirt, sand, or incombustible substance or cover and move to a container.

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)

・Prevent influx into drain ditches, sewers, basements or any other closed areas.

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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]

・Wash hands thoroughly after use.
・Do not eat, drink or smoke when using this product.
・Wear protective gloves, protective clothing, eye protection and face protection.
・Do not inhale dust, smoke, gas, mist, vapor, or spray.
・Avoid inhaling dust, smoke, gas, mist, vapor, or spray.
・Do not remove contaminated clothing from work area.

[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.

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・In the case of a storage area, the roof should be made of noncombustible materials and covered

with metal plates or other light noncombustible materials, and the ceiling should not be made.
・The floor of the storage area should be designed to prevent water from penetrating or seeping into the floor surface.
・The floor of the storage area should be of a construction that prevents the penetration of hazardous materials, appropriately sloped, and provided with an appropriate sump.

[Incompatible Materials]
・Refer to “10. STABILITY AND REACTIVITY”.

[Storage Conditions]
・Store as specified in the Fire Service Act
・Tightly seal the container and store in a cool, well-ventilated place.
・Store safely locked.
・Store away from oxidants and acids.

[Container and Packaging Material]
・Uses containers specified by the Fire Service Act and the United Nations Transport Law.
・Mild steel, steel, aluminum, and zinc are corrosive, so surface-treated steel sheets or stainless steel containers are recommended as storage containers.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Controlling concentration	Not set
Acceptable Concentration	
The Japan Society for Occupational Health	Not set
ACGIH (TLV-TWA)	Not set
Equipment Measures	Install local ventilator systems, places to wash face, eyes, and hands.
Respiratory protection	Wear an appropriate respiratory protection. Wear a gas mask for organic gas, supplied-air mask, air respirator, or oxygen respirator when there is a possibility of exposure.
Hand protection	Wear appropriate protective gloves
Eye protection	Wear appropriate protective glasses Protective glasses (Normal eyeglass type, eyeglasses with side plates, or goggle type)
Skin and body protection	Wear appropriate facial protective equipment and protective clothing
Hygiene measures	Do not eat, drink, or smoke when using this product. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	・Pale yellow transparent liquid
Odor	・Amine / ammonia odor
pH	・No data

Melting point / freezing point	・No data
Boiling point, initial point, and boiling range	・No data
Flash point	・144℃ (Cleveland open-cup flash point test)
Explosive range	・No data
Vapor pressure	・No data
Vapor density	・No data
Specific gravity	・1.01 (25℃)
Solubility	・No data
Octanol / water partition coefficient	・No data
Autoignition temperature	・No data
Decomposition temperature	・No data
Viscosity	・200 ~ 400 mPa・s (25℃)

10. STABILITY AND REACTIVITY

Stability	・Stable under normal handling conditions.
Possibility of hazardous reactions	・When mixed with a strong acid or epoxy resin, it reacts violently with heat generation.
Conditions to avoid	・High temperature heating, contact with contact dangerous substances, flame.
Incompatible materials	・Strong oxidizing agents, strong Lewis acid, strong inorganic acid
Hazardous decomposition products	・Ammonia, amines, nitrogen oxides, organic matter

11. TOXICOLOGICAL INFORMATION

Acute toxicity (oral)	・Toxic if ingested
Acute toxicity (percutaneous)	・Toxic if in contact with skin
Acute toxicity (inhalation)	・No data
Skin corrosion / irritation	・Severe skin burns / eye damage
Serious eye damage / eye irritation	・Severe eye damage
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	・No data.
Aquatic environmental hazard	・No data.
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
- 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
- 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
- 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
- Class 8

United Nations Number
- 2735

Name of Article (UN Transport Name)
- Amines or polyamines (Liquid) (Corrosive substances)

Container Class
- III

Domestic Regulations
- Observe the "15. APPLICABLE LAWS".

Special Safety Measures
- 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.
- Yellow card containment required during transport.

15. APPLICABLE LAWS

Fire Service Act

Type 4 hazardous materials, Petroleum No.3, water-insoluble liquid,
Hazardous category 3

Industrial Safety and Health Act

Harmful Substances Subject to be Indicated Their Names
(Article 57-1, Article 18 of the Order for Enforcement of the Industrial Safety and Health Act)

・Modified chain aliphatic polyamines (Labour Standards Bureau Notification No. 477)

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.