MATERIAL SAFETY DATA SHEET (MSDS)

1. Identification of the substance/mixture and of the company/undertaking product identifier

• Product: NEW W-400H

Recommended use of the chemical and restrictions on use :

- Recommended use: For PVC tile and sheet adhesive

- Restrictions on use : NO DATA

MANUFACTURED / SUPPLIER

- COMPANY: HWA SUNG COMPANY, L.T.D

- FACTORY ADDRESS : 26, Sanmakgongdanbuk 2-gil, Yangsan-si, Gyeongsangnam-do, Korea

- Information offering service or emergency number :

Tel)) +82 55 389 1155 / Fax) +82 55 387 2709

- Revision number and date: 10-21-2019 (REVISION 03)

2. HAZARDS Identification

- Hazard/Risk Classification
 - Serious eye damage/irritation : category 2
- Pictogram



Signal Word : Warning

Hazard Statement

- H302 Harmful if swallowed.

- H312 Harmful in contact with skin.

- H319 Causes serious eye irritation.

• Precautionary Statements (Prevention)

- P264 Wash ... thoroughly after handling

- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye

protection/face protection

- P281 Wear properly protective gloves/protective clothing/ eye protection/face protection
- Precautionary Statements (Response)
 - P301+P312 IF SWALLORED : Immediately call a POISON CENTER/ doctor/
 - P330 Rinse mouth.
 - P302 + P352 IF ON SKIN: Wash with plenty of water.
 - P312 Call a POISON CENTER/doctor./...if you feel unwell
 - P322 Specific action.
 - P363 Wash contaminated clothing before reuse.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 If eye irritation persists: Get medical advise/ attention.
- Storage
 - P410+P403 Protect from sunlight. Store in a well-ventilated place. Avoid direct sunlight
 - Store protected against freezing.
- Precautionary Statements (Disposal)
- P501 Dispose of contents/container to hazardous or special waste collection point.
- Other Hazard/Risk which are not included in the classification criteria.
 - NFPA RAKINGS (SCALE 0-4): HEALTH=0 FIRE=0 REACTIVITY=0

3. Composition/Information on Ingredients Mixtures

- Composition 1
 - Acrylate copolymer

- content: $60.0 \sim 63.0 \text{ wt}\%$

- Cas. No: 38810-51-4

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- Composition 2
 - Filler

- content: 25.0 ~ 27.0 wt%

- Cas No.: 13397-26-7

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- Composition 3
 - ROSIN

- content : $10 \sim 13 \text{ wt}\%$

- Cas No.: 8050-09-7

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- Composition 4
 - WATER

- content : $1 \sim 2 \text{ wt}\%$

- Cas No.: 7732-18-5

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- Composition 5
 - Antifoaming agent

- content: < 1 wt%

- Cas No.: 63148-62-9

4. First-Aid Measure

- On contact with eyes:
 - Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
- On skin contact:
 - Remove contaminated clothing.

- wash affected eyes for at least 15 minutes under running water
- If skin irritation occurs: Get medical advice/ attention.
- Take off contaminated clothing and wash it before reuse.
- If inhaled:
 - Keep patient calm, remove to fresh air, seek medical attention..
 - Stop breathing, try artificial respiration.
 - Get immediate medical advice/ attention
- On ingestion:
 - Do not induce vomiting and rinse mouth.(KEEP AWAKE)
 Immediately call a doctor.
 - Don't feed (In case of unconscious person)
- Most important symptoms and effects, both acute and delayed
 - inhaled

Short – term exposure : irritation

Protracted exposure: irritation,

No data available about important side effect.

- Skin contact

Short – term exposure : irritation

Protracted exposure: irritation,

No data available about important side effect.

Eye contact

Short – term exposure : irritation

Protracted exposure: irritation,

No data available about important side effect.

- Intake

Short – term exposure : nausea, vomit, gastralgia

Protracted exposure: No data available about important side effect.

- Indication of immediate medical attention and notes for physician
 - There is no specific antidote
 - According to symptoms, treat the patient supportively

5. Fire-Fighting Measures

- Suitable extinguishing media: water spray, dry powder, foam, carbon dioxide
- Unsuitable extinguishing media: No data available.
- Specific hazards arising from the chemical
 - Thermal decomposition products : carbon oxide, nitrous oxide.
 - Fire and explosion risk : nothing or slight
- special protective equipment and precaution for fire-fighters:
 - Full firefighting turn-out gear (bunker gear).
 - Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
 - Any self-contained breathing apparatus with a full facepiece.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
 - Use personal protective clothing. Avoid contact with skin and eyes.
 Avoid inhaled.
- Environmental precautions
 - The atmosphere : No data available
 - Soil : No data available
 - Underwater : No data available
- Methods and material for containment and cleaning up
 - Spills

Stop leak if you can do it without risk.

Keep unnecessary people away, isolate hazard area and deny entry. Isolate contamination area.

Keep unnecessary people away, isolate hazard area and deny entry.

Block the other ignition source.

- For small spills: Pick up with suitable absorbed material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulation.

7. Handling and Storage

- Precautions for safe handling :
 - Wear protective Gear.(clothing/goggles/ gloves)
 - Use only outdoors or in a well-ventilated area.
 - Do not handle until all safety precautions have been read and understood.
- Conditions for safe storage, including any incompatibilities :
 - The term of guarantee : 6 month (Conditions : At room temperature, normal pressure)
 - Storage protected against freezing.
 - Caution about restricted material
 - Keep container tightly closed.
 - Protect from sunlight.
 - Store the products in a well-ventilated place
 - Obey the relevant regulations
 - Keep away from heat/ sparks/ open flames/ hot surface. No smoking

8. Exposure Controls/Personal Protection

- Control parameters (e.g. occupational exposure limit values, biological limit values) :
 - No occupational exposure limits established by OSHA, ACGIH, or NOIOSH.
- Appropriate engineering controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

- Personal protective equipment
 - Eye protection:
 - Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate wark area.
 - Respiratory protection

Don't inhale dust and vapor.

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

- Hand protection: Wear appropriate chemical resistant gloves.
- Body protection : Wear appropriate chemical resistant clothing.

9. Physical and Chemical Properties

Appearance : cream type

• Color: White

• Odor : faint aromatic

Odour threshold : No data available

• pH: 7.0 ± 1.0

Melting point : No data available

• The first stage boiling point & boiling point range: No data available

• Flash point (°C): above 100°C

• Evaporation rate : No data available

• Flash point : No data available

Flammability:
 No data available

• Upper/lower flammability or explosive limits : No data available

Vapour pressure : No data available

• Solubility in Water : soluble

Reactive vapour density (air):
 No data available

• Specific gravity : 1.2 ± 0.2

• Partitioning coefficient n-octanol/water : No data available

Thermal decomposition : No data available

∙ Viscosity : cream type cps/25 °C

• Solids content : 75 ± 3 (wt%)

Molecular weight : No data available

10. Stability and Reactivity

• Chemical stability: Stable under normal temperatures and pressures.

- Hazardous polymerization has not been reported to occur under normal temperatures and pressures.
- Conditions to avoid
 - Avoid heat, flames, sparks and other sources of ignition.
- Material to avoid
 - Oxidizing agent, Reducing agent.
 - Avoid a strong acid and a strong alkali
- Thermal decomposition products : carbon oxide, nitrogenous compound

11. Toxicological Information

• Information on the likely routes of exposure :

Inhalation: No data available
 Ingestion: No data available
 Skin contact: No data available
 Eyes contact: No data available

• Health hazards information

Acute toxicity

Oral: Unclassed

Percutaneous: Unclassed

Inhale: Unclassed

Skin corrosion/irritation: unclassed

Serious eye damage/irritation: category 2

Acute exposure, chronic exposure : No date available

Respiratory sensitization : unclassed
 Skin sensitization : unclassed
 Carcinogenicity : nothingness

Industrial Safety and Health Act : No
OSHA : No
NTP : No
IARC : No

Germ cell mutagenicity : unclassedReproductive toxicity : unclassed

- Specific target organ toxicity (single exposure) : unclassed

- Specific target organ toxicity (repeated exposure) : unclassed

- Aspiration hazard : unclassed

12. Ecological Information

Aquatic and terrestrial ecotoxicity: No data available
 Persistence and degradability: No data available
 Bioaccumulative potential: No data available
 Mobility in soil: No data available
 Other adverse effects: No data available

13. Disposal Considerations

Waste treatment methods :

Must be disposed of or incinerated in accordance with local regulations.

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Disposal Considerations

Observe national and local legal requirements

14. Transport Information

UN number: No classification
 UN proper shipping name: Not applicable
 Transport hazard class(es): Not applicable
 Packing group: Not applicable
 Marin pollution: Not applicable

• Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises:

Not applicable.

15. Regulatory Information

Industrial Safety and Health Act : No data available.
 Toxic Chemical Control Act : No data available.
 Dangerous Material Safety Control Act : No data available.

Wastes Management Act : Designated waste

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16. Other Information

• Information source and references :

Korea Occupational Safety and Health Agency

National Institute of environmental Research Chemicals information

Manufacturing company's MSDS

• Issuing date : 07-01-2013

Revirsion date: 10-21-2019

Version: 03

 Other: The data contained in this safety data sheet describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet.