

SAFTY DATA SHEET

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : HERME SEAL 101Y
 Company name : NIHON HERMETICS CO.,LTD.
 Address : 2-31-8 Nishi-gotanda, Shinagawa-ku, Tokyo 141-0031, Japan
 Phone number : 03-3492-3677
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 Reference number : ZS-004

2. HAZARDS IDENTIFICATION

GHS Classification

: Flammable liquids	Category 2
Acute toxicity Inhalation(Vapour)	Category 4
Skin corrosion/skin irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1
Reproductive toxicity	Category 1
	Additional category for effects on or via lactation
Specific target organ toxicity	Category 1(Central nervous system)
— single exposure	Category 2(Respiratory system)
	Category 3(Respiratory tract irritation, Narcotic effects)
Specific target organ toxicity,	Category 1(Central nervous system, Kidney)
— repeated exposure	Category 2(Respiratory system, Auditory organ)
Hazard to the aquatic environment	Category 2
— acute hazard	
Hazard to the aquatic environment	Category 3
— long-term hazard	

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

GHS label elements

Pictogram or Symbol



Signal word

: Danger

Hazard statement

: Highly flammable liquid and vapour
 Harmful if inhaled (vapour)
 Causes skin irritation
 Causes eye irritation
 Suspected of causing genetic defects
 May cause cancer
 May damage fertility or the unborn child
 May cause harm to breast-fed children
 May cause respiratory irritation
 May cause drowsiness dizziness
 May cause damage to organs (Respiratory system)
 Causes damage to organs (Central nervous system)
 May cause damage to organs (Respiratory system, Auditory organ) through prolonged or exposure

Causes damage to organs (Central nervous system, Kidney) through prolonged or exposure

Toxic to aquatic life

Harmful to aquatic life with long lasting effects

Precautionary statement

Prevention

Obtain special instructions before use.

Do not handle until safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/equipment.

Use non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/mist/vapours.

Wash hand thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid contact during pregnancy and while nursing.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Response

In case of fire: Use dry chemicals, carbon dioxide, foam and dry sand for extinction.

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

Call a doctor if you feel unwell.

Storage

Store locked up. Keep cool.

Store in a well-ventilated place. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local regulation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization : Mixture

Ingredients and contents :

Component name	CAS Number	Contents (Wt %)
Synthetic resin & others	—	50–60
Toluene	108-88-3	25–35
Crystalline silica	14808-60-7	<10
Ethyl acetate	141-78-6	< 10
1-butanol	71-36-3	< 5
Vinyl acetate	108-05-4	< 5
Triethanolamine	102-71-6	< 1
Xylene	1330-20-7	< 0.3
Ethyl benzene	100-41-4	< 0.3

4. FIRST-AID MEASURES

IF INHALED

- : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call doctor if you feel unwell.

IF ON SKIN

- : Remove/Take off immediately all contaminated clothing.
- Rinse skin with water/shower.
- If skin irritation occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.

IF IN EYE

- : Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

- : Rinse mouth. Do not induce vomiting.
- Immediately call doctor.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

- : Dry chemicals, carbon dioxide, alcohol-resistant foam and dry sand

Unsuitable extinguishing media

- : Water jet

Specific hazards during fire

- : Highly flammable liquid and vapour
- It is easy to burn extremely, and ignites easily by heat, the spark, and the flame.
- Heating may induce explosion of containers.
- The gas of stimulation, toxicity or the causticity might be generated by a fire.

Specific fire-fighting

- : Move removable containers to a safe place if safe to do so.
- Cool irremovable containers and surrounding areas by sprinkling water.
- Fully cool containers with plenty of water even after extinction.

Protection for fire-fighter

- : Wear chemical protective clothing and the proper air respirator when engaged fire-fighting.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Guide people away from downwind of the leakage.
- Restrict the area around the leakage to authorized personnel.
- Stay on the windward side.
- Get away from low place.
- Ventilate before entering tightly closed places.
- Do not touch or walk over the leaked substance.
- Operators wear suitable protective equipment, avoid skin contact and inhalation of gas.

Environment precautions

- : Avoid release to the environment.
- Avoid release to gutters, sewage ditches, or rivers.

Recovery and neutralization

- : Use dry sand, soil, or waste cloths to absorb the leaked substance, and collect them in a hermetic container.

Methods and materials for containment and cleaning up

- : Stop leak if safe to do so.

Preventive measures for secondary accident

- : Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Prevent entry into waterways, sewers, basements or confined areas.

7. HANDLING AND STORAGE

Handling

Technical measures

- : Please refer to section 8 equipment measures and personal protection equipment.

Local and general ventilation

- : Please refer to section 8 local or whole ventilation.

Safe handling advice

- : Obtain special instructions before use.
- Do not handle until safety precautions have been read and understood.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Keep container tightly closed.
- Use explosion-proof electrical/ventilating/equipment.
- Use non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe dust/mist/vapours.
- Wash hand thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid contact during pregnancy and while nursing.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid release to the environment.

Avoidance of contact

- : Please refer to section 10.

Storage**Technical measures**

- : Apply the fireproof structure to walls, pillars and floors of the storage room.
- Use noncombustible material for beams.
- Use noncombustible material for roofs of the storage room.
- Cover the roof with sheet metal plates or other light noncombustible materials on the roofs. Do not make ceiling.
- For floors of the storage room, apply a structure that prevents water influx/infiltration.
- For floors of the storage room, apply a structure that prevents infiltration of hazardous substances, and make appropriate slopes and cesspools.
- In the store room, install the daylighting, lighting, and ventilating equipment needed for storing or handling hazardous substances.

Storage conditions

- : Keep away from heat/sparks/open flames/hot surfaces and sunlight.
- Keep away from oxidizing agents.
- Store in a well-ventilated place. Keep container tightly closed.
- Keep cool. Store locked up.

Incompatible materials

- : Please refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

	Standard control concentration	Occupational exposure limits	
		Japan society for occupational health	ACGIH
Toluene	20ppm	50ppm 188mg/m ³	TLV-TWA 20ppm
Ethyl acetate	200ppm	200ppm 720mg/m ³	TLV-TWA 400ppm
1-butanol	25ppm	50ppm 150mg/m ³	TLV-TWA 20ppm
Xylene	50ppm	50ppm 217 mg/m ³	TLV-TWA 100ppm TLV-STEL 150ppm
Ethyl benzene	20ppm	50ppm 217 mg/m ³	TLV-TWA 100ppm TLV-STEL 125ppm
Crystalline silica	Not established	Inhalant dust 0.03 mg/m ³	TLV-TWA 0.025 mg/m ³
Vinyl acetate	100ppm	Not established	TLV-TWA 10ppm
Triethanolamine	Not established	Not established	TLV-TWA 5mg/m ³

Equipment measures

- : Use explosion-proof electrical/ventilating/equipment.
- Take precautionary measures against static discharge.
- Make available in the work area with emergency shower and eye washer.
- Provide ventilation to control exposures within the exposure limit.

Personal protection equipment

- Respiratory protection : Gas masks for organic vapor
- Hand protection : Solvent-proof of protection gloves
- Eye protection : Safety goggles
- Skin protection : Face shield, full-body suit, impervious boots and apron

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Milky white liquid
- Odour : Aromatic
- pH : No data
- Melting point/freezing point : -95°C (Toluene)
- Boiling point : 77°C (Ethyl acetate)
- Flash point : -2.8°C
- Explosion limit : Lower limit: 1.1 vol% (Toluene)
Upper limit: 11.3 vol% (1-butanol)
- Vapor pressure : 10kPa(20°C) (Ethyl acetate)
- Vapor density : No data
- Specific gravity : 1.2 (20°C)
- Solubility : Insoluble in water
- Partition coefficient: octanol/water : No data
- Auto-ignition temperature : 345°C (1-butanol)
- Decomposition temperature : No data

10. STABILITY AND REACTIVITY**Stability**

- : Stable under normal condition and anticipated storage.

Possibility of hazardous reactions

- : Reacting violently with oxidizing agent can cause fire or the explosion.
- May cause violent combustion or explode when heated.
- May cause degrade under the influence of acid, base, UV light.

Conditions to avoid

- : Heating, High temperature.
- Contact with UV ray, strong oxidizing agent, strong alkali.

Incompatible materials

- : Oxidizing agent, Hydrogen peroxide, Strong alkali.

Hazardous decomposition products

- : Carbon monoxide, Carbon Dioxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity, oral		
: Toluene (Not classified)	rat	LD ₅₀ : 5000 mg/kg
Ethyl acetate (Not classified)	rat	LD ₅₀ : >5000 mg/kg
1-butanol (Not classified)	rat	LD ₅₀ : 4360 mg/kg
Xylene (Category 5)	rat	LD ₅₀ : 3500 mg/kg
Ethyl benzene (Category 5)	rat	LD ₅₀ : 3500mg/kg
Vinyl acetate (Not classified)	rat	LD ₅₀ : 2900 mg/kg
Triethanolamine (Not classified)	rat	LD ₅₀ : 7269.3 mg/kg
Acute toxicity, dermal		
: Toluene (Not classified)	rat	LD ₅₀ : 12000mg/kg
Ethyl acetate (Not classified)	rabbit	LD : >18000mg/kg
1-butanol (Not classified)	rabbit	LD ₅₀ : 3636mg/kg
Xylene (Classification not possible)	rabbit	LD ₅₀ : >4350mg/kg

Ethyl benzene (Not classified)	rabbit LD ₅₀ : 15400mg/kg
Vinyl acetate (Not classified)	rabbit LD ₅₀ : >5000mg/kg
Triethanolamine (Not classified)	rabbit LD : >2000mg/kg/24H
Acute toxicity, inhalation(vapour)	
: Toluene(Category 4)	rat LC ₅₀ : 4000ppm/4H
Ethyl acetate (Category 4)	rat LC ₅₀ : 16000ppm(19600ppmV/4H)
Xylene (Not classified)	rat LC ₅₀ : 29.08mg/L/4H
Ethyl benzene (Category 4)	rat LC ₅₀ : 17.2mg/L (4000 ppm)
Acute toxicity, inhalation (dust, mist)	
: 1-butanol (Not classified)	rat LC ₅₀ : 8000 ppm (24.2mg/L)
Skin corrosion/irritation	
: Toluene(Category 2)	
Ethyl acetate (Not classified)	
1-butanol (Category 2)	
Xylene (Category 2)	
Ethyl benzene (Category 3)	
Vinyl acetate (Category 2)	
Triethanolamine (Category 2)	
Serious eye damage /eye irritation	
: Toluene(Category 2B)	
Ethyl acetate (Category 2B)	
1-butanol (Category 2A)	
Xylene (Category 2A)	
Ethyl benzene (Category 2B)	
Vinyl acetate (Category 2)	
Triethanolamine (Category 2A)	
Respiratory sensitization	
: No data	
Skin sensitization	
: Toluene(Not classified)	
Ethyl acetate (Not classified)	
Triethanolamine (Category 1)	
Germ cell mutagenicity	
: Toluene(Not classified)	
Ethyl acetate (Not classified)	
Xylene (Not classified)	
Ethyl benzene (Not classified)	
Carcinogenicity	
: Xylene (Not classified)	
Ethyl benzene (Category 2)	
Vinyl acetate (Category 2)	
Crystalline silica (Category 1A)	
Reproductive toxicity	
: Toluene (Category 1A, Additional category for effects on or via lactation)	
Xylene (Category 1B)	
Ethyl benzene (Category 1B)	
Vinyl acetate (Not classified)	
Specific target organ toxicity, single exposure	
: Toluene(Category 1(Central nervous system), Category 3(Respiratory tract irritation, Narcotic effects))	
Ethyl acetate (Category 3(Respiratory tract irritation, Narcotic effects))	
1-butanol (Category 3(Respiratory tract irritation, Narcotic effects))	
Xylene (Category 1(Liver, Respiratory system, Kidney, Central nervous system), Category 3(Narcotic effects))	
Ethyl benzene (Category 2(Central nervous system), Category 3(Respiratory tract irritation))	
Vinyl acetate (Category 3(Respiratory tract irritation, Narcotic effects))	
Triethanolamine (Category 3(Respiratory tract irritation))	

Crystalline silica (Category 1 (Respiratory system))
Specific target organ toxicity, repeated exposure
: Toluene (Category 1 (Kidney, Central nervous system))
1-butanol (Category 1 (Central nervous system, Auditory organ))
Xylene (Category 1 (Respiratory system, Nervous system))
Vinyl acetate (Category 2 (Respiratory system))
Triethanolamine (Not classified)
Crystalline silica (Category 1 (Respiratory system, Kidney))
Aspiration hazard
: Toluene (Category 1)
Xylene (Category 2)
Ethyl benzene (Category 1)

12. ECOLOGICAL INFORMATION

Hazardous to the aquatic environment, acute hazard		
: Toluene (Category 2)	Crustacea Brown shrimp	EC ₅₀ (96H) : 3.5mg/L
Ethyl acetate (Not classified)	Crustacea Daphnia	EC ₅₀ (48H) : 164mg/L
1-butanol (Not classified)	Fish Oryzias latipes	LC ₅₀ (96H) : >100mg/L
Xylene (Category 2)	Fish Rainbow trout	LC ₅₀ (96H) : 3.3mg/L
Ethyl benzene (Category 1)	Crustacea Brown shrimp	LC ₅₀ (96H) : 0.4mg/L
Vinyl acetate (Category 2)	Fish Oryzias latipes	LC ₅₀ (96H) : 2.39mg/L
Triethanolamine (Not classified)	Algae Scenedesmus	ErC ₅₀ (96H) : 169mg/L
Hazardous to the aquatic environment, long-term hazard		
: Toluene (Category 3)		
Ethyl acetate (Not classified)		
1-butanol (Not classified)		
Xylene (Category 2)		
Ethylbenzene (Not classified)		
Vinyl acetate (Not classified)		
Triethanolamine (Not classified)		

13. DISPOSAL CONSIDERATIONS

Residual waste

- : Dispose of waste material at an approved waste treatment/disposal facility in accordance with applicable local, federal regulations.

Contaminated containers or packing

- : Remove contents completely before the disposal of empty container.
- Follow all regulation in your country or region.

14. TRANSPORT INFORMATION

UN Number	: 1133
Proper Shipping Name	: ADHESIVES, containing flammable liquid
Class	: 3
Packing Group	: II

Special precautions

- : Confirm that there is no damage to the container or leakage, and load the substance by enforcing preventive measures against load collapse, so as not to cause shock, inversion, fall and damage.

If a hazard such as a large leakage is likely to occur during transportation, take emergency measures for hazard prevention and notify the closest fire department and other related organizations of the matter.

15. REGULATORY INFORMATION**• IN JAPAN**

Fire Services Act

: Category IV, class I petroleum (water insoluble liquid) Danger level II

Pollutant Release and Transfer Register (PRTR)

: Class I Designated Chemical Substance (Toluene ; 31.97%, Vinyl acetate; 1.98%)

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

: Priority assessment chemical substances (Toluene, Vinyl acetate, Ethylbenzene)

Industrial Safety and Health Act

: Indication substance (Toluene, Ethyl acetate, 1-butanol, Ethylbenzene, Vinyl acetate, Silica)

Notification substance (Toluene, Ethyl acetate, 1-butanol, Xylene, Ethylbenzene,
Vinyl acetate, Silica, Triethanolamine)

Dangerous substance (Flammable substance)

Ordinance on the Prevention of Organic Solvent Poisoning (Type II organic solvent)

Ordinance on Prevention of Hazards Due to Specified Chemical Substances

(Group 2 substances, Special organic solvent etc.; Ethylbenzene)

Ship Safety Act, Japan

: Flammable liquids

Civil Aeronautics Act, Japan

: Flammable liquids

16. OTHER INFORMATION

This safety data sheet was prepared in accordance with JIS Z 7253:2012.

The information herein is given in good faith, but no warranty, express or implied, is made.

Final determination of suitability of any material is the sole responsibility of the user.

All materials may present unknown hazards and be used in caution.