

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND IDENTIFICATION

Chemical product name : HYPER DEMIST2  
Name of manufacturer : YAMAMOTO KOGAKU Co.,Ltd.  
Address : 25-8, Chodo-3 Higashiosaka City Osaka 577-0056 Japan  
Name of section : Quality assurance department  
Phone number : +816 6783 1108  
Fax number : +816 6783 7737  
Emergency call : +816 6783 1108  
Relevant identified uses of the substance or mixture and uses advised against : Relevant identified uses of the product: Anti-fog  
Revised Date/ Issued Data : 2024/10/31

## 2. HAZARDS IDENTIFICATION

### GHS Classification

#### Physical and chemical hazards

Flammable liquids : Category 3

#### Health hazards

Serious eye damage/eye irritation : Category 2

Carcinogenicity : Category 1

Reproductive toxicity : Category 1

Specific target organ toxicity : Category 2 (central nervous system, systemic toxicity)

-single exposure : Category 3 (respiratory irritation, drowsiness, dizziness)

Specific target organ toxicity : Category 1 (liver)

-repeated exposure : Category 2 (central nervous system, blood system)

#### Environmental Hazards

: Not classified

### GHS Label elements

#### Symbols



Signal word : Danger

#### Hazard statements

H226 : Flammable liquid and vapour

H319 : Causes serious eye irritation.

H350 : May cause cancer.

H360 : May damage fertility or the unborn child .

H371 : May cause damage to organs .

H335 : May cause respiratory irritation.

H336 : May cause drowsiness or dizziness.

H372 : Causes damage to organs through prolonged or repeated exposure

H373 : May cause damage to organs through prolonged or repeated exposure

#### Precautionary statements

##### Prevention

P201 : Obtain special instructions before use.

P202 : Do not handle until all safety precautions have been read and understood.

P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking.

P233 : Keep container tightly closed.

P240 : Ground and bond container and receiving equipment.

P241 : Use explosion-proof [electrical/ventilating/lighting] equipment.

P242 : Use non-sparking tools.

P243 : Take action to prevent static discharges.

P260 : Do not breathe dust/fume/gas/mist/vapours/spray.

P264 : Wash hands thoroughly after handling.

P270 : Do not eat, drink or smoke when using this product.

P271 : Use only outdoors or in a well-ventilated area.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

P303+P361+P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 : IF exposed or concerned: Get medical advice/attention.

P337+P313 : If eye irritation persists: Get medical advice/attention.

P370+P378 : In case of fire: Use suitable extinguishing media to extinguish.

Storage

P403+P235 : Store in a well-ventilated place. Keep cool.

P405 : Store locked up.

Disposal

P501 : Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3.COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture  
General product description : Anti-fog agent  
Ingredients and compositions

Ingredients	CAS No.	Wt.%	Industrial Safety and Health Act substance subject to notice (Decree number)
Ethanol	64-17-5	20.0-25.0	61
Propan-2-ol	67-63-0	1.0-2.0	494
1-Propanol	71-23-8	2.0-3.0	494
fluorine-containing oligomer	Yes	<1.0	-
Perfluoroalkyl group-containing polyoxyethylene ether	Yes	<1.0	-

### 4.FIRST-AID MEASURES

Inhalation : If feeling unwell after inhalation of vapors or gases, remove victim to fresh air and keep at rest in a position comfortable for breathing.Call a doctor if symptoms do not improve.

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Skin contact : Quickly wipe off the deposits with a cloth. Wash off thoroughly with plenty of water and soap or skin cleanser. Do not use solvents or thinners. Seek medical attention if there is any change in appearance, irritation or pain.  
Remove all contaminated clothing immediately. Wash the skin with water or shower.

Eye contact : Remove any contact lenses at once. Flush eyes well with flooding amounts of running water for at least 15minutes. assure adequate flushing be separating the eyelids with sterile fingers. If irritation persists,consult a physician.

Ingestion : Rest and seek medical attention immediately.  
Do not swallow vomit. Do not induce vomiting.

### 5.FIRE - FIGHTING MEASURES

Suitable extinguishing media : Dry chemical powder/Carbon dioxide/Foam and dry sand.  
Unsuitable extinguishing media : Direct water jet  
Special hazards arising from the chemical : Will form toxic carbon oxides upon combustion.  
Special protective actions for fire-fighters : Remove combustible materials from surroundings quickly.  
Apply water from a safe distance to cool and protect surrounding area.  
Use appropriate protective equipment (eg fire resistant clothing).  
Fight fire from upwind.

### 6.ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear proper protective equipment. Ventilate indoors well. When working outdoors, work from upwind as much as possible. To prevent secondary disasters by making the surroundings off-limits and keeping unauthorized persons away.

Environmental precautions : Be careful not to affect the environment by discharging into rivers, etc.

Methods and material for containment and cleaning up : Collect spillage in sealable containers and remove to safe place. Adhered matter and waste must be disposed of in accordance with relevant laws and regulations.  
Collect using tools made of materials that do not generate sparks due to impact or static electricity.

### 7.HANDLING AND STORAGE

Precautions for safe handling : Handle in a well-ventilated area. Containers should be tightly capped each time.  
Do not use open flames, sparks, or hot objects in the surrounding area.  
Wear anti-static work clothing and shoes while working.  
Use spark-proof tools.  
To prevent static electricity, ground all equipment and use explosion-proof

electrical devices.

When working in an enclosed space, install sufficient local exhaust ventilation and wear appropriate protective equipment.

After handling, wash hands and face thoroughly, and do not bring contaminated protective equipment into rest areas.

Storage : Avoid direct sunlight. Store in a well-ventilated place.

Take necessary measures to prevent leakage, overflow and scattering.

Lock and store to prevent theft. Keep out of reach of children.

Store away from fire/heat sources.

## 8.EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Ingredients	ACGIH(TLV-TWA)
Ethanol	-
Propan-2-ol	200ppm
1-Propanol	100ppm

Exposure controls : Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

### Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection : Wear gloves made of materials impermeable to organic solvents or chemicals.

Eye protection : Wear safety glasses with side shields.

Skin protection : Wear clothing that does not expose the skin directly. It is desirable that the material is impermeable to chemicals.

## 9.PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Colour	: colorless transparent
Odor	: alcohol smell
Boiling point	: 83°C(As Propan-2-ol)
Flammability	: No information available.
Upper/lower flammability or explosive limits	: No information available.
Flash point	: 11.7°C(As Propan-2-ol)
Auto-ignition temperature	: No information available.
Decomposition temperature	: No information available.
pH	: No information available.
Kinetic viscosity	: No information available.
Solubility	: Soluble in water.
n-octanol/water (log value)	: No information available.
Vapour pressure	: No information available.
Relative density	: No information available.
Relative vapour density	: No information available.
Particle characteristics	: No information available.

## 10.STABILITY AND REACTIVITY

Reactivity	: No self-reactivity.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: No dangerous reaction known under condition of normal use.
Condition to avoid	: High temperature, direct sunlight.
Incompatible materials	: No information available.
Hazardous decomposition products	: If the paint film burns, harmful gases such as CO and NOx may be generated.

## 11.TOXICOLOGICAL INFORMATION

### Information of composition materials

Ingredients	Acute toxicity		
	Oral(mg/kg)	Dermal(mg/kg)	Inhalation(mg/L)
Ethanol	LD50(rat)>6000	LD50(Rabbit) > 20000	-
Propan-2-ol	LD50(rat)>4384	LD50(Rat) > 4050	LD50(rat)>27908
1-Propanol	LD50(rat)>5045	LD50(Rat) > 12870	

- Ethanol
  - Flammable liquids : Category 2
  - Serious eye damage/eye irritation : Category 2B
  - Carcinogenicity : Category 1A
  - Reproductive toxicity : Category 1A
  - Specific target organ toxicity : Category 3 (respiratory irritation, drowsiness)
  - single exposure
  - Specific target organ toxicity : Category 1 (liver)
  - repeated exposure : Category 2 (central nervous system)
- Propan-2-ol
  - Flammable liquids : Category 2
  - Serious eye damage/eye irritation : Category 2
  - Reproductive toxicity : Category 2
  - Specific target organ toxicity : Category 1 (central nervous system)
  - single exposure : Category 3 (respiratory irritation)
  - Specific target organ toxicity : Category 1 (blood system)
  - repeated exposure : Category 2 (respiratory organ, liver, spleen)
- 1-Propanol
  - Flammable liquids : Category 2
  - Serious eye damage/eye irritation : Category 1
  - Reproductive toxicity : Category 2
  - Specific target organ toxicity : Category 3 (respiratory irritation, anesthetic effects)
  - single exposure

\*Toxicity information is specific to the chemical substance; there is no data regarding mixtures.

#### 12.ECOLOGICAL INFORMATION

Ingredients	Hazardous to the aquatic environment	
	Acute hazard	Long-term hazard
Ethanol	-	-
Propan-2-ol	-	-
1-Propanol	-	-
Toxicity	: No information available.	
Persistence and degradability	: No information available.	
Bioaccumulative potential	: No information available.	
Mobility in soil	: No information available.	
Other adverse effects	: No information available.	

#### 13.DISPOSAL CONSIDERATIONS

Comply with relevant laws and regulations and local government standards for disposal.  
 Waste will be disposed of under contract with a licensed industrial waste disposal company.  
 Do not pour the wastewater used to clean containers and equipment into the ground or drains.  
 Waste generated by wastewater treatment, incineration, etc. shall be treated in accordance with the Waste Disposal and Public Cleansing Law and related laws, or the treatment shall be outsourced.

#### 14.TRANSPORT INFORMATION

UN number	: 1170
UN proper shipping name	: ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es)	: 3
Packing group	: III
Environmental hazards	: Not applicable
Transport in bulk according to annex II of MARPOL 73/78 and the IBC Code	: Yes
Emergency measure guidebook number	: 127
land transportation	: If applicable to the Fire Service Law, Industrial Safety and Health Law, and Poisonous and Deleterious Substances Law, follow the transportation method stipulated by each applicable law.
Marine transportation	: Comply with the provisions of the Ship Safety Law.
Air transportation	: Comply with the provisions of the Civil Aeronautics Act.

#### 15.REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture  
 Industrial Safety and Health Act  
 Substance subject to notice : Ethanol, Propan-2-ol, 1-Propanol

Ordinance on Prevention of Hazards due to Specified Chemical Substances : Not applicable  
Ordinance on Prevention of Organic Solvent Poisoning : Not applicable  
Ordinance on Prevention of Lead Poisoning : Not applicable  
Pollutant Release and Transfer Register : Not applicable  
Poisonous and Deleterious Substances Control Act : Not applicable  
Civil Aeronautics Act : Flammable liquids  
Ship Safety Law : Flammable liquids  
Fire Service Act : Not applicable

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#### 16.OTHER INFORMATION

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Reference	Japan Paint Manufacturers Association "Raw material data base" "YOZAI Pocket Book" International Chemical Safety Cards ( ICSC ) SDS of raw materials Chemical Risk Information Platform
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