

Safety Data Sheet (SDS)

1. Product & Company Identification

Product Name

YK Agent (Type Approval Number: Agent No. 48 - 2)

Manufacturer : Yamato Protec Corporation

Address : 5-17-2 Shirokanedai, Minato-ku, Tokyo

Phone Number : 0570-080100 (Navi Dial)

Department : Technical Support

Suggested Use & Limitations on Use : Fire Extinguishing Agent

2. Hazards Identification

GHS Classification

Items not listed below are “Not classified”, “Unclassifiable”

Health Hazards

Acute Toxicity (Oral) : Category 4

Skin Corrosion/Irritation : Category 1

Serious Eye Damage/Eye Irritation : Category 1

Reproductive Toxicity : Category 1B

Specific Target Organ/Systemic Toxicity (Single exposure):

Category 1 (Respiratory system, heart, kidney, central nerve system)

Specific Target Organ/Systemic Toxicity (Repeated exposure):

Category 1 (Respiratory system, heart, central nerve system)

Environmental Hazards

Hazardous to the aquatic environment – Acute hazard : Category 3

Representation or Symbol:



Alert Level : Danger

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Hazard/Toxicity Information

Hatmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye irritation.

May damage fertility or the unborn child

Causes damage to Respiratory system, heart, kidney, central nerve system

Causes damage to Respiratory system, heart, central nerve system through prolonged or repeated exposure.

Harmful to aquatic life

Precautionary statement

Safety Precautions

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

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

Wear respiratory protection.

Do not breathe dust/fume/gas/mist/vapors/spray.

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

Wash hands thoroughly after handling.

Avoid release to the environment.

First Aid Measures

IF SWALLOWED

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

IF ON SKIN

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

IF INHALED

Remove person to fresh air and keep 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.

Storage

Avoid high humidity, keep the product within the operating temperature range, and if possible, under lock indoors.

Disposal

The contents and the container should be disposed of by waste disposal contractors licensed by the Governor.

3. Composition/Information on Ingredients

Single Component or Mixture : Mixture
Chemical Name or Common Name : Fire Extinguishing Agent (Reinforced liquid)

Chemical Name or Common Name	CAS Number	Official Gazette Reference Code	Concentration or Concentration Range
Ethylene glycol	107-21-1	(2)-230	1 to 10%
Potassium carbonate	584-08-7	(1)-153	Trade secret
Coloring agent	Trade secret	Trade secret	Trade secret

4. First Aid Measures

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

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 SWALLOWED

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

If exposed or concerned

Get medical advice/attention.

5. Fire Fighting Measures

Fire Extinguishing Agent : Not applicable due to non-combustibility
Fire Extinguishing Agent Not To Be Used : Not applicable
Special Hazards : No data available
Special Fire Fighting Procedures : Not applicable
Protection of Fire Fighters : Not applicable

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6. Leakage Measures

Personal Precautions, Protective Equipment and Emergency Measures

Immediately isolate the appropriate distances in all directions as leakage area.

Prohibit unauthorized persons from entering the area.

The workers should wear suitable protective equipment (See “8. Exposure Prevention and Protection Measures”) and avoid eye or skin contact and inhalation.

Do not touch any damaged container or leaked material without wearing suitable protective clothing.

Stay in the wind.

Leave depression.

Ventilate sealed places.

Environmental Precautions

Be careful not to affect the environment by discharging into rivers and others.

Dispose of the collection as industrial waste.

Collection, neutralization, containment, and cleanup procedures and equipment

Sweep scattered matter together into a sealable container and dispose of it according to “13. Disposal Considerations”. Then, wash off with plenty of water. In this case, be careful so that thick waste fluid does not flow into rivers and others.

Prevention of Secondary hazards

Collect leaked material immediately.

Prohibit unauthorized persons from entering the area around the leaked place.

In the case of inflow into rivers or public waterways, report to the person in charge of pollution in the local government immediately.

7. Handling and Storage Instructions

Handling

Technical Measures : Implement measures stated in “8. Exposure Prevention and Protection Measures” and wear suitable protective equipment such as protective glasses and gloves.

Local Exhaust and Whole Ventilation : Implement local exhaust and whole ventilation stated in “8. Exposure Prevention and Protection Measures.”

Safe Handling Instructions : Use only outdoors or in a well-ventilated area.
Avoid contact, inhalation or swallowing.
Wash hands thoroughly after handling.

Storage

Storage Conditions : Avoid high humidity, keep the product within the operating temperature range, and if possible, under lock indoors.

Container and Packing Material : Product container or appropriate fire extinguisher.

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8. Exposure Prevention and Protection Measures

Equipment Measures	: Perform exhaust ventilation to keep the atmospheric concentration within exposure limits. Install eye washer and safety shower in the workplace to store and handle this product.
Control Concentration	: Not specified.
Allowable Concentration	: Ethylene glycol STEL C 100 mg/m ³ , Upper limit (ACGIH)
Equipment Measures	: Local exhaust, eye washer, safety shower
Protective Equipment	
Respiratory Protective Equipment	: Wear suitable respiratory protective equipment.
Hand Protection	: Wear suitable protective gloves.
Eye Protection	: Use suitable eye protection.
Skin and Body Protection	: Wear suitable protective clothing and masks.

9. Physical and Chemical Properties

Physical State	: liquid
Color	: Red transparent
Odor	: No odor
Melting Point/Freezing Point	: -30.0°C or less
Boiling Point, initial boiling point and Boiling Range	: No data available
Flammability	: Not applicable
Lower and upper explosion limit/ flammability limit	: No data available
Flash Point	: None
Autoignition Temperature	: No data available
Decomposition Temperature	: No data available
pH	: 12.8 (20 °C)
Kinematic viscosity (Viscosity)	: No data available
Solubility	: Easily soluble in water
Partition coefficient n-octanol/ water (log value)	: Not applicable
Vapor Pressure	: No data available
Density and/ or relative density (specific gravity)	: 1.37 (20 °C)
Relative vapour density	: No data available
Particle characteristics	: Not applicable

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10. Stability and Reactivity

Reactivity	: No data available
Chemical stability	: Stable under normal handling conditions
Hazardous Reactivity	: No hazardous reactivity under normal handling conditions
Conditions to Avoid	: Sunlight, heat
Incompatible Hazardous Materials	: Acid
Hazardous Decomposition Products	: High-temperature decomposition may produce carbon monoxide or carbon dioxide.

11. Toxicological Information

Acute Toxicity	
Oral	: Category 4
Demal	: Not classified
Inhalation :Gass	: Unclassifiable
:Vapours	: Unclassifiable
:Dust and Mist	: Unclassifiable
Skin Corrosion/Irritation	: Category 1
Serious Eye Damage/Eye Irritation	: Category 1
Respiratory or Skin Sensitization	: Not classified
Germ-Cell Mutagenicity	: Not classified
Carcinogenicity	: Unclassifiable
Reproductive Toxicity	: Category 1B
Specific Target Organ Toxicity (Single exposure)	: Category 1 (Respiratory system, kidney, heart, central nerve system)
Specific Target Organ Toxicity (Repeated exposure)	: Category 1 (Respiratory system, heart, central nerve system)
Aspiration Hazard	: No data available

12. Environmental Impact Information

Ecotoxicity	
Hazardous to the aquatic environment – Acute hazard	: Category 3
Hazardous to the aquatic environment – Long term hazard	: Not classified
Persistence and Decomposability	: No data available
Bioaccumulation	: No data available
Migration in Soil	: No data available
Hazardous to the ozonelayer	: Unclassifiable

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13. Disposal Considerations

Residual Waste

Disposal should be in accordance with applicable laws and local regulations. The substance should be disposed of by waste disposal contractors licensed by the Governor or by local public entities if appropriate. Waste disposal contractor, if used, should be well informed of potential hazards and toxicity from the waste.

Contaminated Containers and Packages

Containers should be properly disposed of in accordance with applicable laws and local regulations. If containers are disposed of, their contents should be completely removed.

14. Transport Considerations

United Nations Number	: Not applicable
Product Name	: Not applicable
United Nations Classification	: Not applicable
Container Class	: Not applicable
Marine Pollution Materials	: Not applicable
National Regulations:	
Land Regulatory Information	Follow the provisions of the Fire Service Act
Aeronautical Regulatory Information	Follow the provisions of the Civil Aeronautics Act
Maritime Regulatory Information	Follow the provisions of the Ship Safety Act

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15. Applicable Laws

Industrial Safety and Health Act

Dangerous or Harmful Substances Subject to be Indicated their Names, etc.

(Appended Table 9, Order Article 18 (1) & (2), Article 57-1 of the Act)

Ethylene glycol

Dangerous or Harmful Substances Subject to be Notified their Names, etc.

(Appended Table 9, Order Article 18-2 (1) & (2), Article 57-2 of the Act)

Ethylene glycol (Cabinet Order No. 75): 1-10%

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law):

Not applicable

Poisonous and Deleterious Substances Control Act

Not applicable

Fire Service Act

Not applicable as dangerous goods

Civil Aeronautics Act

Not applicable

Ship Safety Act

Not applicable

Water Pollution Control Act

Not applicable

Sea Pollution Prevention Act

Not applicable

16. Other Information

This product should be used with the understanding that the use of any chemicals involves unknown potential hazards and toxicity. Hazards and toxicity depend on the environment of use and the storage conditions and period. We suggest that those with knowledge and experience be involved in all stages from use through storage and disposal.

The instructions provided in this document should apply when the product is handled normally. If the product is handled in a special way, proper safety precautions should be taken. Also, it should be used under the responsibility of the user.