

## Safety Data Sheet (SDS)

### 1. Product & Company Identification

Product Name : K/SMOKE Fire Extinguishing Agent

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. Hazard Identification

#### GHS Classification

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

#### Physical hazards

Oxidizing solids : Category 2

#### Health hazards

Acute toxicity (Oral) : Category 4

Serious Eye Damage/Eye Irritation : Category 2B

Specific Target Organ Toxicity (Single exposure) : Category 2 (Kidney, blood)  
: Category 3 (Respiratory irritation)

#### Environmental hazards

Hazardous to the aquatic environment, acute hazard : Category 2

Hazardous to the aquatic environment, long-term hazard : Category 2

#### Representation or Symbol



Signal word : Danger

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.



#### Hazard statement

May intensify fire: oxidizer

Harmful if swallowed

Causes serious eye irritation

May cause damage to kidney or blood

May cause respiratory irritation

Toxic to aquatic life with long lasting effects

#### Precautionary statements

##### Safety Precautions

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

Take any precaution to avoid mixing with combustibles.

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

Wash hands thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

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

Use personal protective equipment as required.

#### Response

##### In case of a fire

Appropriate fire extinguishing method.

##### IF SWALLOWED

Get medical advice/attention if you feel unwell.

##### IF ON SKIN

If skin irritation occurs: Get medical advice/attention.

##### 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.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

#### Storage

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

Store locked up.

#### 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

Chemical Name or Common Name	CAS Number	Official Gazette Reference Code	Concentration or Concentration Range
Inorganic potassium compound	Available	Available	Trade secret
Organic potassium compound	Available	Available	Trade secret
Binder	Available	Available	Trade secret

---

### 4. First-aid measures

---

#### IF SWALLOWED

Get medical advice/attention if you feel unwell.

#### IF ON SKIN

If skin irritation occurs: Get medical advice/attention.

#### 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.

#### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

---

### 5. Fire-fighting measures

---

#### Fire Extinguishing Agent

Not applicable because it is a fire extinguishing agent.

#### Fire Extinguishing Agent Not To Be Used

None in particular

#### Special Hazards

May decompose when it is involved in heating or flame.

Note that a splash of carbon dioxide, carbon monoxide, oxide, or chloride is produced by thermolysis or combustion.

If a fire occurs, evacuate windward immediately without fighting the fire.

The objects around the fire should be cooled by pouring water from safe distance for prevention of fire spreading.

#### Special Fire Fighting Procedures

Not applicable

#### Protection of Fire Fighters

Wear an appropriate respirator and protective clothing for chemical extinguishment in case of fire extinguishing work.

---

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.

---

---

## 6. Accidental release 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 before entering.

### Environmental Precautions

Do not release into the environment.

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

Do not bury in the soil.

### Collection, neutralization, containment, and cleanup procedures and equipment

Dispose of according to the description of “13. Disposal considerations.”

### Prevention of Secondary hazards

Remove all ignition sources immediately.

Inflammables (wood, paper, oil, etc.) should be isolated.

Prevent inflow into drainage, sewer, basement or closed places.

---

## 7. Handling and storage

---

### Handling

#### Technical Measures

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

#### Safe Handling Instructions

Avoid direct sunlight.

Do not touch, inhale or swallow.

#### Hygiene Measures

Wash hands thoroughly after handling.

### Storage

#### Technical Measures

Avoid direct sunlight.

Store the product at normal temperature under dry environment.

#### Incompatible Hazardous Materials

See "10. Stability and Reactivity"

#### Storage Conditions

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

Store locked up.

#### Container and Packing Material

Product container.

---

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.

---

---

## 8. Exposure controls/personal protection

---

### Control Concentration

Not specified.

### Allowable Concentration (Exposure limit, biological exposure index)

Not specified.

### Equipment Measures

No special ventilator is necessary.

It is desirable to install eye washer and safety shower in the workplace to store and handle this material.

### Protective Equipment

#### Respiratory Protective Equipment

Wear an appropriate respiratory protective equipment.

#### Hand Protection

Wear an appropriate protective gloves.

#### Eye Protection

Wear an appropriate eye protector (normal glass type, normal glass type with side plate, goggle type).

#### Skin and Body Protection

Wear an appropriate face protector, clothing and protective shoes.

### Hygiene Measures

Do not eat or smoke while using this product.

Wash hands after handling.

---

## 9. Physical and chemical properties

---

Physical State	: Solid
Color	: White
Odor	: No odor
Melting Point/Freezing Point	: No data available
Boiling Point, initial boiling point and Boiling Range	: No data available
Flammability	: No data available
Lower and upper explosion limit/ flammability limit	: No data available
Flash Point	: No data available
Autoignition Temperature	: No data available
Decomposition Temperature	: No data available
pH	: 7.8 to 8.6 (5% water solution: 20 °C)
Kinematic viscosity (Viscosity)	: Not applicable
Solubility	: Soluble in water (May gelate depending on the concentration)
Partition coefficient n-octanol/ water (log value)	: No data available
Vapor Pressure	: No data available
Density and/ or relative density (specific gravity)	: No data available
Relative vapour density	: No data available
Particle characteristics	: Not applicable
GHS Classification	
Oxidizing solids	: Category 2

---

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.

---

---

## 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	: Avoid contact with objects at high temperature, friction, impact, sunlight, organic matter, metal powder, strong oxidizing substance, strong acid and strong alkali.
Incompatible Hazardous Materials	: Organic matter, metal powder, strong oxidizing substance, strong acid and strong alkali.
Hazardous Decomposition Products	: A splash of carbon dioxide, carbon monoxide, oxide, or chloride is produced by thermolysis or combustion.

---

## 11. Toxicological information

---

Acute Toxicity	
Oral	: Category 4
Demal	: Unclassifiable
Inhalation :Gass	: Unclassifiable
:Vapours	: Unclassifiable
:Dust and Mist	: Unclassifiable
Skin Corrosion/Irritation	: Category 3
Serious Eye Damage/Eye Irritation	: Category 2B
Respiratory or Skin Sensitization	: Unclassifiable
Germ-Cell Mutagenicity	: Unclassifiable
Carcinogenicity	: Unclassifiable
Reproductive Toxicity	: Unclassifiable
Specific Target Organ Toxicity (Single exposure)	: Category 2 (Kidney, blood) Category 3 (Respiratory irritation)
Specific Target Organ Toxicity (Repeated exposure)	: Unclassifiable
Aspiration Hazard	: Not classified

---

## 12. Ecological information

---

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

---

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.

---

---

### 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 cleaned for recycling or 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	: No data available
Special Safety Measures	: Not applicable
National Regulations	: See "15. Regulatory information "

---

### 15. Regulatory information

---

#### Japanese Chemical Substances Control Act

Not applicable

#### 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

#### Act on the Protection of the Ozone Layer Through the Control of Specified Substances and other Measures

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.

---

This SDS has been prepared based on the latest information available. However, we cannot guarantee the accuracy of the information and data contained herein, such as descriptions of hazards and toxicity. The latest rules, ordinances, laws and regulations of the national and local governments and organizations should be looked into and should apply.

---