

## Safety Data Sheet (SDS)

### 1. Product & Company Identification

Product Name

Yamato Air Foam 310 (Type Approval Number: Foam No. 60 - 6)

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” or “Not eligible for classification”

Health Hazards

Acute Toxicity (Oral) : Category 5  
Skin Corrosion/Irritation : Category 3  
Serious Eye Damage/Eye Irritation : Category 2B  
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

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.



Health hazard statements

- May be harmful if swallowed
- Causes mild skin irritation
- Causes 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 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

Call a POISON CENTER/ doctor 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.

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.

---

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.

---



---

### 3. Composition/Information on Ingredients

---

Single Component or Mixture : Mixture  
Chemical Name or Common Name : Fire extinguishing foam  
(Protein foam fire extinguishing agent)

Chemical Name or Common Name	CAS Number	Official Gazette Reference Code	Concentration or Concentration Range
Keratin hydrolysate	Trade secret	Trade secret	Trade secret
Ethylene glycol	107-21-1	2-230	5 to 15%

---

### 4. First Aid Measures

---

#### IF SWALLOWED

Call a POISON CENTER/ doctor 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.

---

### 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

---

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. 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 extinguishing equipment

---

## 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 100mg/m<sup>3</sup>, Upper limit (ACGIH)
- Equipment Measures : Local exhaust, eye washer, safety shower
- Protective Equipment
- Respiratory Protective Equipment : Wear a gas mask.
- Hand Protection : Use impervious protective gloves.
- Eye Protection : Wear protective glasses.
- Skin and Body Protection : Wear protective clothing and masks.

---

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.

---

---

## 9. Physical and Chemical Properties

---

Physical State, Form, Color	: Brown-black liquid
Odor	: Unique odor
pH	: 7.0
Boiling Point, initial boiling point and Boiling Range	: No data available
Melting Point/Freezing Point	: No data available
Decomposition Temperature	: No data available
Flash Point	: None
Autoignition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Explosion Limits	: No data available
Vapor Pressure	: No data available
Vapor Density (air = 1)	: No data available
Evaporation Rate	: No data available
Specific Gravity	: 1.15
Solubility	: Easily soluble in water
Octanol-Water Partition Coefficient	: No data available
Viscosity	: 28.5 cSt (20 °C)

---

## 10. Stability and Reactivity

---

Stability	: Stable under normal handling conditions
Reactivity	: No data available
Hazardous Reactivity	: No hazardous reactivity under normal handling conditions
Conditions to Avoid	: No data available
Incompatible Hazardous Materials	: No data available
Hazardous Decomposition Products	: No data available

---

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.

---

---

## 11. Toxicological Information

---

Acute Toxicity (Oral)	: Category 5
Skin Corrosion/Irritation	: Category 3
Serious Eye Damage/Eye Irritation	: Category 2B
Respiratory or Skin Sensitization	: No data available
Germ-Cell Mutagenicity	: No data available
Carcinogenicity	: Not classified
Reproductive Toxicity	: Category 1B
Specific Target Organ Toxicity (Single exposure):	
Category 1 (Respiratory system, heart, kidney, 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

---

Hazardous to the aquatic environment – Acute hazard	: Category 3
Hazardous to the aquatic environment – Long term hazard	: Not classified
Ecotoxicity	: No data available
Persistence and Decomposability	: No data available
Bioaccumulation	: No data available
Migration in Soil	: No data available
Others	
Other Environmental Toxicity:	
BOD: 4.5 x 10 <sup>3</sup> mg/L (3% water solution)	Measurement method JIS K 0102 21
COD: 7.3 x 10 <sup>3</sup> mg/L (3% water solution)	Measurement method JIS K 0102 21

---

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 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

---

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.

---





---

## 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): 5-15%

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 hazardous material

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.

---

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.

---