

## Safety Data Sheet (SDS)

### 1. Product & Company Identification

Product Name

Alpha Foam 310 (Type Approval Number: Foam No. 10 - 1)

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 3  
Acute Toxicity, Inhale : Category 4  
Skin Corrosivity/Irritation : Category 1B  
Serious Eye Damage/Eye Irritation : Category 1  
Carcinogenicity : Category 2  
Reproductive Toxicity : Category 1A  
Specific Target Organ/Systemic Toxicity (Single exposure):  
Category 1 (Central nerve system, respiratory apparatus, kidney, heart)  
Specific Target Organ/Systemic Toxicity (Repeated exposure):  
Category 1 (Central nerve system, respiratory apparatus, heart)

#### Environmental Hazards

Hazardous to the aquatic environment – Acute hazard : Category 2  
Hazardous to the aquatic environment – Long term hazard : Category 2

Representation or Symbol:



Alert Level : Danger

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#### Hazard/Toxicity Information

- Toxic if swallowed
- Harmful if inhaled
- Causes skin irritation
- Causes serious eye damage
- Suspected of causing cancer
- 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.
- Toxic to aquatic life
- Toxic to aquatic life with long lasting effects

#### Precautionary statement

##### Safety Precautions

- Do not handle until all safety precautions have been read and understood.
- 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.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wear respiratory protection.

#### First Aid Measures

##### IF SWALLOWED

- Rinse mouth. Immediately call a POISON CENTER/doctor.

##### IN INHALED

- Remove person to fresh air and keep comfortable for breathing.
- Call a POISON CENTER/doctor if you feel unwell.

##### IF ON SKIN

- Immediately rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

##### 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

- 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.

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### 3. Composition/Information on Ingredients

Single Component or Mixture : Mixture  
Chemical Name or Common Name : Fire extinguishing foam (Aqueous film-forming fire extinguishing foam)

Chemical Name or Common Name	CAS Number	Official Gazette Reference Code	Concentration or Concentration Range
Ethylene glycol	107-21-1	(2)-230	5 to 10%
Glycol	Available	Available	Trade secret
Fluorochemical surfactant	Available	Available	Trade secret
Hydrocarbon surfactant	Available	Available	Trade secret

#### Hazardous Components:

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.  
Class I Specific Chemical Substance (Article 1 of Enforcement Order, Article 2-2 of the Act)  
Act on confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management There of Class I Designated Chemical Substance (Appended Table 1, Article 1 of Enforcement Order, Article 2-2 of the Act)  
Air Pollution Prevention Act Toxic air pollutant  
(Article 2-13 of the Act: Notice of the Environment Agency)  
Perfluoro (octane-1-sulfonic acid) or its salt (Content of less than 1%)

### 4. First Aid Measures

#### IF SWALLOWED

Rinse mouth. Immediately call a POISON CENTER/doctor.

#### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

#### IF ON SKIN

Immediately rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

#### 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

Get medical advice/attention.

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## 5. Fire Fighting Measures

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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

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### 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.

When a fire does not occur during leakage, wear hermetic and impermeable 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.

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## 7. Handling and Storage Instructions

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### 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

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## 8. Exposure Prevention and Protection Measures

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- 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<sup>3</sup>, 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.

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## 9. Physical and Chemical Properties

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Physical State, Form, Color	: Brown-black liquid
Odor	: Unique odor
pH	: 7.8 (20 °C)
Melting Point, Freezing Point	: No data available
Boiling Point, initial boiling point and Boiling Range	: No data available
Flash Point	: None
Explosion Limits	: No data available
Vapor Pressure	: No data available
Vapor Density (air = 1)	: No data available
Specific Gravity (relative density)	: 1.02 (20 °C)
Solubility	: Easily soluble in water
Octanol-Water Partition Coefficient	: Not applicable
Autoignition Temperature	: No data available
Decomposition Temperature	: No data available
Odor Threshold	: No data available
Evaporation Rate	: No data available
Flammability (solid, gas)	: Not applicable
Viscosity	: 6.3 cSt (20 °C)

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## 10. Stability and Reactivity

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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	: HF (hydrogen fluoride), F2 (fluorine gas) and fluorocarbons can be generated.

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## 11. Toxicological Information

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Acute Toxicity, Oral	: Category 3
Acute Toxicity, Inhale	: Category 4
Skin Corrosivity/Irritation	: Category 1B
Serious Eye Damage/Eye Irritation	: Category 1
Respiratory or Skin Sensitization	: No data available
Germ-Cell Mutagenicity	: No data available
Carcinogenicity	: Category 2
Reproductive Toxicity	: Category 1A
Specific Target Organ/Systemic Toxicity (Single exposure):	
Category 1 (Central nerve system, respiratory apparatus, kidney, heart)	
Specific Target Organ/Systemic Toxicity (Repeated exposure):	
Category 1 (Central nerve system, respiratory apparatus, heart)	
Aspiration Hazard	: No data available

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## 12. Environmental Impact Information

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Hazardous to the aquatic environment – Acute hazard	: Category 2
Hazardous to the aquatic environment – Long term hazard	: Category 2
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: $9.0 \times 10^3$ mg/L (3% water solution)	Measurement method JIS K 0102 21
COD: $1.1 \times 10^4$ mg/L (3% water solution)	Measurement method JIS K 0102 21

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### 13. Disposal Considerations

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#### 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.

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### 14. Transport Considerations

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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

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

Class I Specific Chemical Substance (Article 1 of Enforcement Order, Article 2-2 of the Act)

Perfluoro (octane-1-sulfonic acid) or its salt

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

Class I Designated Chemical Substance

(Appended Table 1, Article 1 of Enforcement Order, Article 2-2 of the Act)

Perfluoro (octane-1-sulfonic acid) or its salt

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): 5-10%

Air Pollution Prevention Act

Toxic air pollutant (Article 2-13 of the Act: Notice of the Environment Agency)

Perfluoro (octane-1-sulfonic acid) or its salt

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

Order Article 2 Fluorochemical

Sea Pollution Prevention Act

Not applicable

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## 16. Other Information

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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.

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