

# Material Safety Data Sheet

## [1. Chemical Products and Company Identification]

Designation of Chemical Product

Company symbol: YFF

**Extinguishing Agent for Fire Extinguishers Mechanical Foam**

Model Approval No.: Agent No.21-1

Company Name: Yamato Protec Corporation

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

Tel. No. : 0570-080100 (Navidial)

Reference Number: MSDS No.055

Date of Preparation: April 13, 2011

## [2. Composition/Information on Ingredients]

Distinction of single chemical or mixture: Mixture

Chemical name or common name	Concentration or concentration range (weight percent)	Reference number by official gazette	CAS No.	Chemical characteristic (structural formula)
		Law Concerning the Examination and Regulation of Manufacture, etc of Chemical Substances		
Ethylene glycol	Trade secret	2-230	107-21-1	HOCH <sub>2</sub> CH <sub>2</sub> OH
Surface active agent	Trade secret	Trade secret	Trade secret	Trade secret
Phosphate	Trade secret	Trade secret	Trade secret	Trade secret

## [3. Hazards Identification]

Most important hazard and effect: Not applicable

Specific hazard: Not applicable

## [4. First Aid Procedures]

**In case of inhalation:** Transfer the victim immediately to a place where air is fresh and keep him or her quiet in bed. Seek medical advice in case unusualness is observed.

**In case of skin contact:** Wash the affected part immediately with plenty of water. Seek medical advice in case the victim feels pain.

**In case of eye exposure:** Wash the eyes immediately with clean water for 15 minutes or more. Seek medical advice in case the victim feels pain.

**In case of swallowing:** Make the victim drink plenty of water. Seek medical advice in case unusualness is observed. If the victim is not conscious, he or she must not be orally given anything.

## [5. Fire Fighting Procedure]

**Fire extinguishing procedure:** No pertinent procedure because the product is incombustible. (This product is fire extinguishing agent.)

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**[6. Spill or Leak Procedure]**

<b>Cautions on humans:</b>	Especially none
<b>Cautions on environment:</b>	Especially none
<b>Removal method (recovery and disposal):</b>	In case the spillage or leakage is in small quantity, recover it into a sealable empty container after being absorbed to waste or the like and, then, dispose of it in accordance with the description in [13. Notice on Disposal]. In case the spillage or leakage is in large quantity, prevent it from outflowing by enclosing it with a bank or the like, recover it into a sealable empty container in a safe place, and dispose of it similarly. In addition, take care that the disposal shall not impact the environment, such as sewage outfalls, surface water, groundwater and rivers.

**[7. Notice on Handling and Storage]****Handling**

<b>Handler exposure prevention:</b>	Wear suitable protective equipment, if necessary.
<b>Technical countermeasures:</b>	Not applicable
<b>Cautions:</b>	Not applicable
<b>Cautions on safe handling:</b>	Not applicable

**Storage**

<b>Technical countermeasures:</b>	Especially none
<b>Mixture or contact-prohibited substance:</b>	Not applicable
<b>Storage conditions:</b>	Store it in a cool and dark place in a tightly closed condition.
<b>Safe container and packaging:</b>	A product container and an applicable fire extinguisher are recommended. A container which cannot be sealed is inappropriate.

**[8. Exposure Prevention Measures]**

<b>Respiratory protective device:</b>	Wear a gas mask or a simplified gas mask, if necessary.
<b>Protective equipment for hands:</b>	Wear protective globes, if necessary.
<b>Protective equipment for eyes:</b>	Wear safety glasses, if necessary.

**[9. Physical and Chemical Properties]**

<b>Physical condition:</b> Liquid	<b>Color:</b>	Light yellow transparent color
<b>Smell:</b> Peculiar odor	<b>pH (20 °C):</b>	7.5
<b>Boiling point:</b> 102 °C	<b>Flash point:</b>	None
<b>Freezing point:</b> -21.0 °C	<b>Density (specific gravity) (20 °C):</b>	1.12
<b>Viscosity (20 °C):</b> 4 cP	<b>Solubility:</b>	Easily soluble in water

**[10. Stability and Reactivity]**

<b>Stability:</b>	Especially no conditions or material that should be avoided.
<b>Dangerous reaction:</b>	Especially none

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### [11. Information on Harmfulness]

Acute toxicity: No measured data available.

Local effect: No measured data available.

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### [12. Information on Environmental Impact]

No measured data available.

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### [13. Notice on Disposal]

Perform either disposal using suitable protective equipment in accordance with pertinent laws or local regulations such as "Law regarding treatment and cleaning of waste materials" or disposal by entrusting it to the licensed waste materials treating trade. When disposing of polluted containers or packaging, carry it out after removing the contents completely.

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### [14. Notice on Transportation]

Not pertinent to the dangerous object in "Fire Service Law" and the poisonous material in "Poisonous and Deleterious Substances Control Law."

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### [15. Applied Laws]

Fire Service Law:

Product (extinguishing agent for fire extinguishers) with national test certificate which complies with the "ministerial ordinance defining the technical standards of the extinguishing agent for fire extinguishers"

Industrial Safety and Health Law:

No pertinent clauses

Poisonous and Deleterious Substances Control Law: No pertinent clauses

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### [16. Other information]

The descriptions in this literature are based on the newest information this company holds but are not to guarantee the safety of the product. On the occasion of use, the newest rules, ordinance or legal regulations of the country, the district or the regulating authority should be investigated and given top priority.

Since all chemicals possibly have unknown hazardousness, it is necessary to pay close attention to the handling of the product. In addition, the values such as the content, physical and chemical properties, etc. are not the guaranteed ones. Danger and harmful nature also change with the environment at the time of use, the storage state and the storage period. The handling, use, storage or disposal should be performed under the direction of experts or experienced persons.

Furthermore, notices in this literature are written in consideration of normal handling. In the case of special handling, therefore, please take additional attentions to the situation. Please establish safe using conditions under the user's own responsibility.