

**Material Safety Data Sheet**

## [1. Chemical material etc. and company information]

Name of chemical material, etc.

Internal code: HK Air Foam

Air Foam Liquid for Fire extinguishing Systems (YAMATO 3% type)

Company Name: Yamato Protec Corp.

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

Tel. No.: 0570-080100 (Navi dial)

Reference No.: MSDS No.044 Preparation/Revision date: Mar.29, 2007

## [2. Information on composition/component]

Distinction of a single material or a mixture: Mixture

Chemical name or general name	Concentration or range of concentration (wt %)	Official Gazette public notice reference No.	CAS No.	Chemical characteristics (Structural formula)
		LCERMCS*		
Hydrolyzed Keratin	Company secret	Company secret	Company secret	Company secret
Ethylene glycol	8.3%	2-230	107-21-1	HOCH <sub>2</sub> CH <sub>2</sub> OH

\* Law Concerning the Examination and Regulation of Manufacturer, etc. of Chemical Substances

## [3. Outline of hazardousness/harmfulness]

Most important hazardousness/harmfulness and its influence: Not applicable

Specific hazardousness/harmfulness: Not applicable

## [4. First aid procedures]

In case of inhalation: Transfer the victim immediately to a place where air is fresh and keep him quiet. Seek medical advice, if necessary.

In case of skin contact: Wash the victim immediately with plenty of water. In case the victim feels pain, seek medical advice, if necessary.

In case of eye exposure: Wash the eyes with clean water for 15 minutes or more by opening eyelid of the victim. Seek medical advice, if necessary.

In case of swallowing: Wash the mouth of the victim, make him drink plenty of water, and seek medical advice. In case of his losing consciousness, nothing must be given through his mouth.

## [5. Fire fighting procedure]

Fire extinguisher: Not applicable because the product is incombustible. (This product is a fire extinguishing agent)

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## [6. Spill or leak procedure]

Precautions against the human body:	None specifically
Precautions against the environment:	None specifically
Method of removal(Recovery/disposal):	In case the spillage or leakage is in small quantity, recover it into an empty sealable container after being absorbed into waste or the like and, then, dispose of it in accordance with the descriptions in [13. Notice on disposal]. In case the spillage or leakage is in large quantity, prevent it from outflowing by surrounding it with a bank or the like, recover it into an empty sealable container after directing it to a safety place, and dispose of it in the same way. In the meantime, cares must be taken to the disposal so that no influence is given to the environment such as sewage out-fall, surface water, ground water, river, etc.

## [7. Notice on handling and storage]

## Handling

Prevention of exposure by handler:	Wear suitable protective devices, if necessary.
Technical measure:	Not applicable
Precaution:	Not applicable
Precautions for safety handling:	Not applicable

## Storage

Technical measure:	None specifically
Mix/contact inhibited material:	Not applicable
Storage condition:	Store in a cool and dark place with a tightly sealed condition. Do not mix with water or other chemicals.
Safe container/packaging material:	Recommended: Product container and appropriate tank Not recommended: Unsealable container.

## [8. Exposure prevention procedure]

Respiratory protective device:	Wear gas mask, simple gas mask, etc., if necessary.
Hands protective device:	Wear protective globes, etc., if necessary.
Eyes protective device:	Wear safety glasses, etc., if necessary.

## [9. Physical/chemical properties]

Physical appearance:	Liquid	Color:	Burnt brown
Odor:	Specific smell	pH (20 ):	7.0
Boiling point:	102 °C	Flash point:	None
Pour point:	-15.0 °C	Density(Specific gravity) (20 °C):	1.15
Viscosity (20 °C):	35cP	Solubility:	Easily soluble in water

## [10. Stability and reactivity]

Stability:	No conditions or materials to be avoided specifically.
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 Dangerous reaction:                   None specifically
 

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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]
COD<sub>Mn</sub>:             7.3 x 10<sup>3</sup> mg/L (3% aqueous solution)BOD:                 4.5 x 10<sup>3</sup> mg/L (3% aqueous solution)

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 [13. Notice on disposal]

Carry out disposal of remaining waste materials either in accordance with pertinent laws and regulations including local regulations such as “Law regarding treatment and cleaning of waste materials” by wearing appropriate protective devices, or by entrusting to a licensed waste material treating trade. In case of disposing of contaminated containers/packaging, do it after their contents are completely removed.

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 [14. Notice on transportation]

Not falling under the category of hazardous material in “Fire Service Law” and of poisonous and deleterious substances in “Poisonous and Deleterious Substances Control Law”.

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 [15. Applicable laws]

Fire Service Law:                   Not applicable

Industrial Safety and Health Law:   Not applicable

Poisonous and Deleterious         Not applicable  
Substances Control Law:
 Others:                   Containing component       Ethylene glycol  
                               Law of Pollutant Release and Transfer Register (PRTR)  
                               Chemical substances designated as Class I by the pertinent  
                               Enforcement Ordinance  
                               (An Annexed Table 1: 43)
 

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## [16. Other information]

The descriptions in this literature are based on the newest information held by this company, but are not to guarantee in any way regarding the described data and the descriptions on dangerousness, harmfulness, etc.

At the time to use the product, please inquire into the newest rules, regulations, laws, etc of specific country, region, institution, etc., and place the highest priority on them.

In addition, please use the product out of recognition that all chemicals can possibly have unknown dangerousness and hazardousness.

Dangerousness and hazardousness also change depending upon the environment at the time of use, storage condition, and storage period. It is recommended, therefore, to handle it under the guidance of a person

who has expertise and experiences at all time from the time of use to storage and disposal.

Furthermore, notices in this literature are written in consideration of normal handling. In case of special handling, therefore, please use it under the user's own responsibility after devising safe conditions suitable to the specific situation.