

SAFETY DATA SHEET



1. Identification of the substance / Preparation and Company

Product: FFJ-500 / 1000 Synonyms: Flash Fog Fluid, Fog Generator Fluid

Supplied by: Arias Tech Ltd. 375 Brunel Road, Mississauga, Ontario, L4Z 1Z5, Canada
Tel 905 502 0249

2. Composition Information on ingredients

Contains food grade poly glycols CAS#57-55-6, and de-ionized water CAS#7732-18-5

Contains no substances in Part 1 of the Approved Supply List, or with a maximum exposure limit (MEL) specified in Schedule 1 of COSHH.

Contains mono propylene glycol, for which an occupational exposure standard has been set.

3. Hazardous Information

No significant hazard to man or environment under normal conditions of handling and use.

The concentration of smoke components is below the OES (Occupational Exposure Standard) under normal operating conditions.

Ingestion:	Low toxicity
Eye/skin:	Low toxicity
Inhalation:	Low concentration of hazardous substances in vapour. Undiluted vapour should not be inhaled. Note: The concentration of vapour components in the final product is below the OES under normal operating conditions).

4. First aid measures

Exposure route	Symptom	Treatment
Skin contact	Mild irritation	Drench the skin with plenty of water. Remove contaminated clothing and wash before re-use. If large areas of the skin are damaged or if irritation persist seek medical attention.
Eye contact	Mild irritation	Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention
Inhalation	Mild irritation of nose and throat	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete, seek medical attention.
Ingestion	Mild irritation of gastrointestinal tract	Wash out mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell seek medical attention.

5. Fire Fighting measures

Suitable extinguishers:	Alcohol-resistant or all-purpose-type foam. Use carbon dioxide or dry powder for small fires only.
Unsuitable extinguishers:	Do not direct a solid stream of water or foam into hot burning pools; as this may cause frothing and increase the intensity of a fire
Hazardous combustion products	Oxides of carbon including aldehydes.
Special equipment for fire fighting:	Self contained breathing apparatus.

6. Accidental release measurements

Safety precautions	Wear appropriate PPE (Personal Protection Equipment) when handling - see section 8.
Environmental precautions	Prevent entry into drains and water courses.
Clean up procedure	Bund or absorb material with sand, earth or other suitable absorbent material. If possible, transfer to a salvage tank. otherwise absorb residues and place in suitable labeled containers and hold for waste disposal - see section 13

7. Handling and storage

No special requirements or conditions for

handling and storage other than normal precautions for the safe handling of chemicals, and an appreciation of information given in this Safety Data Sheet

Safe handling. Avoid prolonged skin contact. Avoid contact with eyes. Ensure good general ventilation of area. Avoid creating spray. Do not breath undiluted vapour (see section 3 above).

Storage Store in original closed containers. Store at ambient temperature. Store away from materials listed in section 10.

8. Exposure controls and personal protection

No special training is required for handling this preparation other than normal precautions for safe handling of chemicals, and an appreciation of the information given in this data sheet. An assessment of workplace risk will determine risk protection that may be required, this is identified below

Hand	PVC coated or rubber gloves.
Eye	Goggles or face shield.
Skin	Overalls and boots.
Respiratory	Type approved RPE (Respiratory Protection Equipment) for organic vapours and mists, if required.
Hygiene measures	Always wash thoroughly after handling chemicals.

9. Physical and chemical properties

Appearance:	Colourless liquid	Flash point:	>78°C (test flame extinguished at 78°C)
Odour	Mild	Flammability limits	2.5 - 15.5 v/v (estimated)
pH:	Neutral	Vapour pressure:	2.54 kPa at 20°C
Boiling point/range	105.8 - 209.4°C	Relative density:	1.058 at 20°C/20°C
Melting point/range:	<-20°C	Solubility in water:	Completely miscible

10. Stability and reactivity

Stability	Stable in normal conditions.
Known hazardous reactions	Possibility of explosive decomposition if combined with strong acids or bases at elevated temperatures.
Conditions to avoid	Elevated temperatures.
Materials to avoid	Strong acids and bases; strong oxidizers.
Hazardous decomposition products	Oxides of carbon, including aldehydes.

11. Toxicology Information

OES for mono propylene glycol set at 150 ppm (total vapour and particulates) for 8-hour TWA (Time Weighted Average), and 10 mg/my (particulates) for 15-minute STEL (Short Term Exposure Limit).

LD50 for mono propylene glycol: 21000 - 33700 mg/kg oral - rat, >10000 mg/kg skin rabbit.

Note: This refers to concentrated component fluid.

May cause slight irritation to skin, eyes and mucous membranes. Large doses may produce adverse effects on liver, kidneys and central nervous system.

No evidence in developmental toxicity studies for either embryotoxic or teratogenic effects.

12. Ecological information

Mobility	Liquid with low volatility, soluble in water, predicted to have high mobility in soil
Degradable	The preparation is largely biogradable: BOD5 (Biochemical Oxygen Demand) + 1.08 gO ₂ /g: ThOD = 1.68 gO ₂ /g. COD (Chemical Oxygen Demand) = 1.63 gO ₂ /g BOD20/ThOD= 86%
Accumulation	Low
Short and long term effects	LC50 Fathead minnow= 4600 - 54900 mg/l • EC ₅₀ Daphnia magna = 4850 - 34400 mg/L
Environmental effects	Moderate degradation. Material is expected to be readily biodegradable in the environment under both aerobic and anaerobic conditions.
Aquatic toxicity	Very low toxicity to fish: no adverse effect level < 1 00mg/l. Practically non-toxic to aquatic invertebrates. LC50 to algae or plants was reported to be > 100mg/l in water or > 100mg/kg in soil.

13. Disposal Considerations

Substance	Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations.
Container	As for substance. Used containers must not be cut up or punctured until completely purged of product residues.

14. Transport information

No special precautions for transport.

15. Regulatory information

Supply label details:	In accordance with CHIP 2, Regulation 9	Label name:	FFJ-500 / FFJ-1000
Symbol:	No symbol	Risk phrases	No risk or safety phrases stipulated
		Safety phrases:	

Use of this material may be governed by the following regulations: COSHH, HSWA, MHSW

Users are advised to consult these regulations for further information. The information contained in this data sheet does not constitute an assessment of workplace risk as required by other health and safety legislation.

16. Other information

This material is used for the production of a Fog security vapour in a FlashFog brand of security device. The concentration of fog components is below the OES under normal operating conditions. It must not be used for any other purpose, or in any other equipment. Further details may be available on request from the supplier, whose address and telephone number are given in section 1.

Sources of information: Suppliers' safety data sheets for substance used as raw materials in the preparation.

BH 40/97 NFPA 325M SOS NoIOI August 97 GH/0312/GS/OL (N.O.H.S)

17. Legal disclaimer

The above information is based on the present state of our knowledge of the product at the time of publication, it is given in good faith, no warranty is implied with respect to the quality of the specification of the product. The user must satisfy himself that the product is entirely suitable for his purpose. All information is public and can be found in many different sources.

If you have purchased the product for supply to a third party, it is your duty to take all necessary steps to ensure that any person handling and using the product is provided with the information in this sheet. If you are an employer it is your duty to tell your employees and others who may be affected by any hazard described in this sheet and of any precautions that should be taken.