SAFETY DATA SHEET
PRO STEAM SIMULATION FLUID

1. Identification of the Substance/Preparation & Company/Undertaking

1. **Identification of the substance or preparation**:

   Name: Pro Steam Simulation Fluid

   Synonyms: AA Steam Fluid

2. **Use of the substance/preparation**:

   Fluid for use in the creation of smoke effects using a dedicated smoke machine.

3. **Company/undertaking identification**:

Martin Manufacturing (UK) Plc. Tel: +44 (0) 1507 604399
Belvoir Way, Fax: +44 (0) 1507 601956
Fairfield Industrial Estate,
Louth,
Lincolnshire,
LN11 0LQ
UK

2. Composition/Information on Ingredients

Contains:

Food grade glycols

Polyglycols CAS Registry Number: **57-55-6**

De-mineralised water.

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 monopropylene 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.

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 smoke components in the final product is below the OES under normal operating conditions)

4. First Aid Measures

Exposure Route	Symptom	Treatment
Inhalation	Mild irritation of nose & throat	Remove from exposure, rest and keep warm. In severe cases, or if recovery is not rapid or complete, seek medical attention
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 persists seek medical attention
Eye Contact	Mild irritation	Irrigate thoroughly with water for at least 10 minutes. Obtain medical attention
Ingestion	Mild irritation of gastro-intestinal 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 Measures

Safety Precautions	Wear appropriate PPE 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 labelled containers and hold for waste disposal - see section 13

7. Handling and Storage

Safe Handling	Avoid prolonged skin contact. Avoid contact with eyes. Ensure good general ventilation of area. Avoid creating spray. Do not breathe undiluted vapour
Storage	Store in original closed containers Store at ambient temperature Store away from materials listed in section 10
Specific Use(s)	Only for use in designated smoke machine for the production of smoke as a special effect

8. Exposure Controls and Personal Protection

Exposure Limit Values	Does not exceed 10mg/m^3 for particulate suspension and 474mg/m^3 for total vapour plus particulates.
Exposure Controls:	
Respiratory	Type approved RPE for organic vapours and mists, if required
Hand	PVC coated or rubber gloves
Eye	Goggles or face shield
Skin	Overalls and boots
Hygiene Measures	Always wash thoroughly after handling chemicals

9. Physical and Chemical Properties

Appearance:	Colourless Liquid
Odour:	Mild
pH	Neutral
Boiling Point/Range:	101.6 - 201.6 °C
Melting Point/Range:	< -20 °C
Flash Point:	> 78 °C (test flame extinguished at 78 °C)
Flammability Limits:	2.9 - 18.1 v/v (estimated)
Vapour Pressure:	2.67 kPa at 20°C
Relative density:	1.050 at 20 °C/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 oxidisers
Hazardous decomposition products	Oxides of carbon, including aldehydes

11. Toxicological Information

OES for monopropylene glycol set at 150 ppm (total vapour and particulates) for 8-hour TWA, and 10 mg/m^3 (particulates) for 15-minute STEL.

LD_{50} for monopropylene glycol:
21000 - 33700 mg/kg oral - rat, >10000 mg/kg skin - rabbit.

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
Persistence and Degradability	The preparation is largely biodegradable: BOD_5 = 1.08 gO_2/g; ThOD = 1.68 gO_2/g; COD = 1.63 gO_2/g BOD_{20}/ThOD = 86%
Bio accumulative Potential	Low
Short and long-term effects	LC_{50}, fathead minnow = 4600 - 54900 mg/l EC_{50}, Daphnia magna = 4850 - 34400 mg/l
Other	

13. Disposal Considerations

Substance	Via an authorised 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	Regular DJ
Symbol Risk phrases Safety phrases	No risk or safety phrases stipulated
E.E.C. Number	

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

No special training is required for handling this preparation other than normal precautions for safe handling of chemicals

This material is usually used for the production of synthetic smoke in an appropriate JEM smoke- machine. The concentration of smoke 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.

This datasheet updated to meet Commission Directive 2001/58/EC

Sources of information:

Suppliers' Safety Data Sheets for substances used as raw materials in the preparation.

EH 40/97

NFPA 325M

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.

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.