

## Appendix E – Health and Safety Data

### Smoke Simulant Fluid – Concept Smoke Fluid A – NSN 1365 99 733 9217

#### 1. Identification of the substance/preparation and company/undertaking

Name: Concept Smoke Fluid A

Supplied by: Concept Engineering Limited  
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Maidenhead, Berkshire SL6 3UA  
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#### 2. Hazards Identification

Not a hazardous substance according to Regulation (EC) no 1272/2008

This substance is not classified as dangerous according to Directive 67/548/EEC

Not generally regarded as hazardous in normal conditions of handling and use.

This product does not need to be labelled in accordance with EC directives or respective national laws

#### 3. Composition/information on ingredients

Chemical -	Glycerine
Exposure -	10 mg/m <sup>3</sup>
CAS -	56-81-5 / 7732-18-5
EINECS -	200-289-5
REACH-	Exempted

#### 4. First Aid measures

Exposure Route	Symptom	Treatment
Inhalation	Irritation of Breathing Passages	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 a large area of the skin is 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	If swallowed wash out mouth with water. Do not induce vomiting. Give water to drink. If patient feels unwell, seek medical attention. Immediate treatment/Antidote: Symptomatic treatment.

#### 5. Fire Fighting Measures

Suitable Extinguishers –	Water mist, alcohol resistant foam, dry powder, CO <sub>2</sub> .
Hazardous Combustion Products –	Oxides of carbon
Special Equipment for Fire Fighting –	Self contained breathing apparatus.

## 6. Accidental Release Measures

Safety Precautions –	Wear appropriate PPE – see section 8
Environmental Precautions –	Prevent entry of large spillages into drains and water courses.
Clean up Procedure –	Bind 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. Wash spill site with plenty of water after material has been taken up.

## 7. Handling & Storage

Handling Ventilation:	General Ventilation
Storage Temperature Range:	Ambient
Humidity range:	Dry.
Keep away from:	See section 10
Suitable storage media:	Store in original containers

## 8. Exposure Controls/Personal Protection

Exposure Limits:	10 mg.m <sup>3</sup> , 8h TWA Type:OES
Monitoring Method:	As mist
Protective Measures	
Respiratory protection:	Unlikely to be required in normal use – see below
Hand:	Gloves
Eye:	Goggles
Skin:	Overalls and boots
Hygiene Measures -	Always wash thoroughly after handling chemicals.

The smoke produced by Concepts smoke generators has been rigorously tested to ensure that in normal conditions it is non toxic. Independent health and safety reports indicate that dense smoke concentrations can be entered without any serious health risk for short periods of time. We do nevertheless recommend the following;

- persons who are asthmatic or suffer from a respiratory complaint are not subjected to dense smoke concentrations
- the use of suitable PPE in the event of extended exposure or repeated exposure to such environments (fire trainers for example) Concept recommend the 3m 6000 facemask with 2 x 2135 p3 particulate filters, or similar
- if used in conjunction with live fires, where, by definition there is the potential for products of combustion to be formed, along with other hazards (unburnt propane etc), self contained breathing apparatus (SCBA) should always be worn.

## 9. Physical & Chemical Properties

Appearance	Colourless liquid
PH	Neutral
Boiling Point/range	Ca. 290°C
Melting Point/range	Ca. 18°C, solidifies at a much lower temperature.
Flash Point	177°C
Autoignition temperature	400°C
Vapour Pressure	<0.01 mbar @ 20°C; <1 mbar @ 100°C
Relative density	1262 Kg/m <sup>3</sup> @ 20°C
Solubility in water	Miscible
Solubility in solvent	Miscible with ethanol, slightly soluble in acetone, insoluble in ether and in chloroform.
Partition coefficient	-2.6
Viscosity	Ca. 1300 mPa.s @ 20°C

## 10. Stability & Reactivity

Stability:	Stable in normal conditions
Known Hazardous reactions:	Violent or explosive reactions with some oxidising agents
Conditions to avoid:	Moisture, extremes of temperature
Materials to avoid:	Strong oxidising agents
Hazardous decomposition products:	Thermal decomposition may release acrolein.

## 11. Toxicological Information

Effects: Low oral toxicity. Slightly irritating to rabbit skin and eyes; unlikely to cause irritation in humans.

## 12. Ecological Information

Environmental Effects	
Mobility:	Soluble in Water
Degradability:	Biodegradable. BOD5 / COD : 0.87 / 1.16 gO <sub>2</sub> /g
Aquatic Toxicity:	LC50, fish > 5000 mg/l; IC50, algae > 2900 mg/l; EC50, bacteria > 10000mg/l

## 13. Disposal Considerations

Substance: Via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

Container: As substance

## 14. Transport Information

The goods are not classified as hazardous.

The chemical contents are not classified by IMDG as a marine pollutant.

For further information or guidance please contact Concept (techsupport@conceptsmoke.com)

## 15. Regulatory Information

Supply label details:	CLP
Label name:	Glycerine / Smoke Fluid A
Symbol	No risk or safety phrases stipulated
Risk phrases	No risk or safety phrases stipulated
Safety phrases	No risk or safety phrases stipulated
Users are advised to consult these regulations for further information. The information contained in this data sheet does not constitute an assessment of workplace risks	

## 16. Other Information

Further details may be available upon request from Concept Engineering.

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