

Appendix D3 – Health and Safety Data SDS

Smoke Simulant Fluid – Concept Smoke Fluid B1 / CB1

SECTION 1 – IDENTIFICATION

Product Name: B1 / CB1 Smoke Fluid

Product Label: B1 / CB1 Smoke Fluid

Manufacturer: Concept Smoke Systems / Concept Engineering Ltd

7 Woodlands Business Park, Woodlands Park Avenue, Maidenhead, Berks, SL6 3UA

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REACH No : A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration

SECTION 2 – HAZARD 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 CLP /GHS

SECTION 3 – COMPOSITION / INGREDIENTS

B1/ CB1 smoke fluid contains 1 or more of products 1/2/3 plus product 4

- | | | |
|--------------------------------------|---|--------|
| 1. Glycerol CAS 56-81-5 | } | (>50%) |
| 2. Monopropylene Glycol CAS 57-55-6 | | |
| 3. Triethylene Glycol CAS 112-27-6 | | |
| 4. Demineralized Water CAS 7732-18-5 | | (<50%) |

SECTION 4 – FIRST AID MEASURES

General: No Special Procedure

Eye: Flush With Water. Obtain Medical Attention in Case of Irritation.

Skin: Wash Off With Water.

Ingestion: Do Not Induce Vomiting. Rinse Mouth with Water, Then Drink Water. Obtain Medical Attention in Case of Irritation.

SECTION 5 – FIRE-FIGHTING MEASURES

Flammability: Not Flammable

Means of Extinction: N/A. Water Spray, Foam, CO2, or Dry Powder can be used on

Surrounding Fire _ Special Fire Hazards: None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Spilled Fluid or Splashed Fluid Droplets Can Cause Slip Hazard,

Mop up the Fluid and Dispose of it

Environmental Protection: No Federal Requirements, Check State and Local Government Requirements

SECTION 7 – HANDLING AND STORAGE

Handling: No Special Procedure

Storage: Keep Out of Reach of Children, Keep Container Tightly Closed Until Use

Storage Temperature: <60°C

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:	10 mg.m ³ , 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 (available on request) 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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Colorless

Odor: Neutral

Freezing Point: <0°C

Boiling Point: >100°C

Density: >1.0 g/cm³

Solubility in Water: Arbitrary

pH: 6-8 at 20°C

Hazardous Categorization: None

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Reacts with Strong Oxidants

Thermal Decomposition: No Known Dangerous Products

Hazardous Reaction: None Listed

SECTION 11 – TOXICOLOGICAL INFORMATION

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

SECTION 12 – ECOLOGICAL INFORMATION

Environmental Effects

CAS 56-81-5

Mobility:	Soluble in Water
Degradability:	Biodegradable. BOD ₅ / COD : 0.87 / 1.16 gO ₂ /g
Aquatic Toxicity:	LC ₅₀ , fish > 5000 mg/l; IC ₅₀ , algae > 2900 mg/l; EC ₅₀ , bacteria > 10000mg/l CAS 57-55-6
Mobility:	Liquid with low volatility, soluble in water. Predicted to have high mobility in soil.
Toxicity to fish:	Mortality NOEC Pimephales promelas 52390mg/l – 96h
Toxicity to daphnia / aquatic invertebrates:	Mortality NOED Daphnia 13.020mg/l – 48h EC ₅₀ Daphnia magna >10000mg/l -48h
Degradability:	BOD ₅ = 1.08 gO ₂ /g; ThOD = 1.68 gO ₂ /g; COD = 1.63 gO ₂ /g; BOD ₂₀ /ThOD = 86% The substance is substantially biodegradable.
Bioaccumulative potential:	Low

CAS 112-27-6

Toxicity

Toxicity to fish LC₅₀ - Leuciscus idus (Golden orfe) - > 100 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC₅₀ - Daphnia magna (Water flea) - 46,500 mg/l - 48 h

Toxicity to algae Remarks: no data available

Persistence and degradability Biodegradability Result: > 70 % - Readily biodegradable.

Bioaccumulative potential: No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil : no data available

Results of PBT and vPvB assessment: Not available

This product is not harmful to the environment.

Ready Biodegradable according to EC / OECD

SECTION 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

SECTION 14 – TRANSPORT INFORMATION

The goods are not classified as hazardous / dangerous under ADR/RID, IMDG, or IATA

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

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

SECTION 15 – REGULATORY INFORMATION

Supply label details:	CLP
Label name:	B1/ CB1 Smoke Fluid
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 risk	

SECTION 16 – OTHER INFORMATION

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 this information