



Revision: 13-02-2020

SAFETY DATA SHEET

SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Product Name: Smoke Fluid
- Product Part Number: BST222, BST223, BST225, BST221, BST220
- Product Description: Aqueous solution of glycols

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture: Special effects fluid (fog and smoke effects)
- Use advised against: Poorly ventilated areas.

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Back Stage Technologies (Europe) Ltd
- Address of Supplier: Unit 6 Redman Business Centre
Porte Marsh Industrial Estate
Calne
Wiltshire
SN11 9RA
UK
- Telephone: +44 (0)1249 818 601
- Email: Info@bste.co.uk

1.4 Emergency telephone number

- Emergency Telephone: +44 (0)1249 818 601
(09:00 - 17:00 Mon - Fri)
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SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Not Classified

2.2 Label elements

- This product does not need to be labelled in accordance with EC Regulations and Directives
- Signal Word: None
- Symbols: None
- Hazard phrases
None
- Precautionary Phrases
None

2.3 Other hazards

- May be harmful if swallowed
 - May cause respiratory tract irritation.
 - Not flammable but will support combustion
 - Not a PBT according to REACH Annex XIII
 - Not a vPvB according to REACH Annex XIII
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SECTION 3 Composition/information on ingredients



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SECTION 3 Composition/information on ingredients (....)

3.1 Substances

3.2 Mixtures

- glycols

Concentration: 1 - 50%

Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Not Classified

SECTION 4 First aid measures

4.1 Description of first aid measures

- Contact with eyes
If substance has got into eyes, immediately wash out with plenty of water for several minutes
Irrigate eyes thoroughly whilst lifting eyelids
If eye irritation persists: Get medical advice/attention.
- Contact with skin
Remove contaminated clothing immediately and drench affected skin with plenty of water.
Then wash with soap and water
If skin irritation or rash occurs: Get medical advice/attention.
- Ingestion
If swallowed, rinse mouth with water (only if the person is conscious)
Give 200-300mls (half pint) water to drink
Get immediate medical advice/attention.
- Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

- Vapours or aerosols may cause irritation of eyes, nose and respiratory tract
- The ingestion of significant quantities may cause damage to kidneys
- The ingestion of significant quantities may cause damage to central nervous system

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
 - Monitoring is advised of cardio-vascular, lung and CNS functions as well as acid-base balance and kidney and liver parameters.
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SECTION 5 Fire-fighting measures

5.1 Extinguishing media

- In case of fire use water, alcohol resistant foam, carbon dioxide or dry agent
- Unsuitable extinguishing media: high volume water jet

5.2 Special hazards arising from the substance or mixture

- Gives off irritating or toxic fumes (or gases) in a fire.
- May form explosive vapour/air mixtures
- Decomposition products may include carbon oxides

5.3 Advice for firefighters



SECTION 5 Fire-fighting measures (....)

- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.
 - Keep container(s) exposed to fire cool, by spraying with water
 - Shut off all ignition sources
 - Collect contaminated fire extinguishing water separately. This **MUST** not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.
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SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Do not breathe spray/mists
- Ensure adequate ventilation
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid contact with skin and eyes.

6.2 Environmental Precautions

- Do not flush spilt material into any public water system
- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

6.3 Methods and material for containment and cleaning up

- Absorb spillage in inert material and shovel up
- Place in appropriate container
- Seal containers and label them
- Remove contaminated material to safe location for subsequent disposal
- Ventilate the area and wash spill site after material pick-up is complete
- Wash thoroughly after dealing with spillage

6.4 Reference to other sections

- See Section 8 & 13
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SECTION 7 Handling and storage

7.1 Precautions for safe handling

- Avoid breathing vapours, mist or gas
- Use only in well ventilated areas
- May form explosive vapour/air mixtures
- Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback
- Avoid contact with skin and eyes
- When using do not eat, drink or smoke
- Wash thoroughly after handling.
- Contaminated clothing should be laundered before reuse
- Contaminated work clothing should not be allowed out of the workplace.
- Eyewash bottles should be available
- See Section 8

7.2 Conditions for safe storage, including any incompatibilities

- Store in a dry place. Store in a closed container.
 - Keep container in a well ventilated place
 - Keep in an area equipped with impermeable flooring.
 - Protect from light
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SECTION 7 Handling and storage (....)

- Keep away from oxidisers, heat, flames or ignition sources
- Keep away from acids and alkalis
- Keep away from isocyanates
- Keep away from food, drink and animal feedingstuffs
- Store at ambient temperature
- Storage containers should not be made from aluminium

7.3 Specific end use(s)

- Special effects fluid (fog and smoke effects)

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

Special effects fogs produced using this product shall be considered to meet the requirements of the Entertainment Services and Technology Association (ESTA) Standard E1.5 - 2009 if the concentration of total dihydric and trihydric alcohols breathed by a worker or audience member is no greater than 10 mg/m³ TWA long-term exposure and 40 mg/m³ short-term peak exposure.

- glycols
(Germany) MAK 1000 mg/m³
DNEL (dermal) 40 mg/kg (bw/day) Industry, Long Term, Systemic Effects
DNEL (inhalational) 50 mg/m³ Industry, Long Term, Local Effects
DNEL (dermal) 20 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
DNEL (inhalational) 25 mg/m³ Consumer, Long Term, Local Effects
PNEC (fresh water) 10 mg/l
PNEC (marine water) 1 mg/l
PNEC (fresh water sediment) 46 mg/kg
PNEC (soil) 3.32 mg/kg
PNEC (STP) 10 mg/l

8.2 Exposure controls

- Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines
- Wear protective gloves/protective clothing/eye protection/face protection.
- The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.
- Glove material: nitrile rubber
Thickness: 0.35mm
Breakthrough time: >=8 h
Reference: GESTIS
- Wear safety glasses approved to standard EN 166.
- In case of inadequate ventilation wear respiratory protection.
- Where an air-purifying respirator is required, use EN 141, EN 405, EN 14387, Type A



Gloves



Suit



Goggles



Respirator



No Smoking



SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Liquid, clear, colourless
- Odour: None
- Odour threshold: No information available
- pH: 6 - 8
- Melting point/freezing point: (Lit) -7°C
- Initial boiling point and boiling range: (Lit) 102°C
- Flashpoint: (Lit) (c.c.) >177°C
- Evaporation Rate: No information available
- Flammability (solid,gas): Not applicable
- Upper/lower flammability or explosive limits: Upper explosive limit (Lit) 9.2 % (in air), Lower explosive limit (Lit) 0.9 % (in air)
- Vapour Pressure: No information available
- Vapour Density: No information available
- Relative Density: 1.05
- Solubility(ies): Soluble in water
- Partition Coefficient (n-Octanol/Water): Log Kow - 1.7 @ 20°C
- Autoignition Temperature: >350°C
- Decomposition temperature: No information available
- Viscosity: Viscosity 3 centipoise at 20 deg C
- Explosive Properties: May form explosive mixtures with air
- Oxidising Properties: Not oxidising

9.2 Other information

- No information available
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SECTION 10 Stability and reactivity

10.1 Reactivity

- Reacts violently with acids and alkalis
- Reacts violently with oxidizing substances
- Reacts violently with isocyanates

10.2 Chemical stability

- Considered stable under normal conditions

10.3 Possibility of hazardous reactions

- May form explosive vapour/air mixtures

10.4 Conditions to avoid

- Keep away from heat and sources of ignition

10.5 Incompatible materials

- Incompatible with strong acids
- Incompatible with alkalis (strong bases)
- Incompatible with oxidizing substances
- Incompatible with isocyanates

10.6 Hazardous Decomposition Products

- Decomposition products may include carbon oxides
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SECTION 11 Toxicological information

11.1 Information on toxicological effects

- Acute Toxicity
 - The main route of exposure is via the respiratory tract and almost complete absorption is assumed.
 - Lethal dose for man: 5-15g/kg/bw
 - LD50 (oral, rat) >2000 mg/kg
 - LC50 (inhalation, rat) (dust/mist) > 5.2 mg/l/4h
 - LC50 (inhalation, rat) (vapour/aerosol) >5000 mg/m³/4h
 - LD50 (dermal, rabbit) >2000 mg/kg
 - Based on available data, the classification criteria are not met
- Skin corrosion/irritation
 - Based on available data, the classification criteria are not met
- Serious eye damage/irritation
 - Based on available data, the classification criteria are not met
- Respiratory or skin sensitisation
 - Based on available data, the classification criteria are not met
- Germ cell mutagenicity
 - No evidence of mutagenic effects
- Carcinogenicity
 - No evidence of carcinogenic effects
- Reproductive toxicity
 - No evidence of reproductive effects
- Specific target organ toxicity (STOT) - single exposure
 - No information available
- Specific target organ toxicity (STOT) - repeated exposure
 - Can cause damage to: Kidneys (oral route) through prolonged or repeated exposure
- Aspiration hazard
 - No information available
- Contact with eyes
 - Mildly irritating to eyes
- Contact with skin
 - May cause irritation
- Ingestion
 - The ingestion of significant quantities may cause dizziness, confusion, headache or stupor
 - The ingestion of significant quantities may cause drowsiness
 - The ingestion of significant quantities may cause diarrhoea
 - The ingestion of significant quantities may cause damage to kidneys
 - The ingestion of significant quantities may cause damage to central nervous system

 - The ingestion of significant quantities may cause damage to liver
 - The ingestion of significant quantities may cause nausea/vomiting
- Inhalation
 - Effect may vary from irritation of the nasal mucous membrane to severe lung irritation.

 - May cause coughing



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SECTION 11 Toxicological information (....)

- May cause dry throat
 - In cases of severe exposure, irritation of the respiratory tract may develop
 - In cases of severe exposure, drowsiness may develop
 - In cases of severe exposure, dizziness, confusion, headache or stupor may develop
-

SECTION 12 Ecological information

12.1 Toxicity

- No experimental test data available for the mixture
- glycols
 - LC50 (fish) 59900-92500 mg/l (96 hr)
 - LC50 (crustaceans) 39300-52400 mg/l (48 hr)
 - EC50 (crustaceans) 42400-52400 mg/l (48 hr)
 - EC50 (Daphnia magna) >10000 mg/l (48 hr)

12.2 Persistence and degradability

- Readily biodegradable

12.3 Bioaccumulation Potential

- Bioaccumulation is not expected

12.4 Mobility in soil

- Completely soluble in water
- This substance is poorly absorbed onto soils or sediments

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

12.6 Other Adverse Effects

- Water Hazard Class 1 (Germany)
-

SECTION 13 Disposal considerations

13.1 Waste treatment methods

- This material and/or its container must be disposed of as hazardous waste
- Contaminated absorbent must be removed in sealed, plastic lined drums.
- Do not reuse empty containers without commercial cleaning or reconditioning
- Do not pierce or burn container, even after use
- Empty containers may contain flammable vapours
- Avoid release to the environment.
- Disposal should be in accordance with local, state or national legislation

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)
 - Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.
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SECTION 14 Transport information

Not classified as hazardous for transport

14.1 UN Number



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SECTION 14 Transport information (....)

- UN No.: Not applicable
 - 14.2 UN Proper Shipping Name
 - Proper Shipping Name: Not applicable
 - 14.3 Transport hazard class(es)
 - Hazard Class: Not applicable
 - 14.4 Packing group
 - Packing Group: Not applicable
 - 14.5 Environmental hazards
 - Not Classified
 - 14.6 Special precautions for user
 - No special precautions are required for this product
 - 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
 - Not applicable
 - 14.8 Road/Rail (ADR/RID)
 - Proper Shipping Name: Not applicable
 - ADR UN No.: Not applicable
 - ADR Hazard Class: Not applicable
 - ADR Packing Group: Not applicable
 - Tunnel Code: Not applicable
 - 14.9 Sea (IMDG)
 - Proper Shipping Name: Not applicable
 - IMDG UN No.: Not applicable
 - IMDG Hazard Class: Not applicable
 - IMDG Pack Group.: Not applicable
 - 14.10 Air (ICAO/IATA)
 - Proper Shipping Name: Not applicable
 - ICAO UN No.: Not applicable
 - ICAO Hazard Class: Not applicable
 - ICAO Packing Group: Not applicable
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SECTION 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 - This Safety Data Sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830
 - Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
 - 15.2 Chemical Safety Assessment
 - A REACH chemical safety assessment has been carried out
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SECTION 16 Other information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in



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SECTION 16 Other information (....)

combination with any other materials or in any other process.

Version 2 - Revised 13-02-2020 due to change in formulation.