





















Unit Safety Coordinator/Supervisor: William Hitchins

Describe the activity. <i>(Inc. how long/ how often this is carried out and quantity substance used)</i>	Production of smoke via evaporation of glycol/water mixture. Performed daily, for a maximum duration of 240 minutes at a time.		
Location	Indoors and outside.		
Identify the persons at risk:	Employees <input checked="" type="checkbox"/>	Venue Staff <input checked="" type="checkbox"/>	Public <input checked="" type="checkbox"/>
Name the substance(s) involved in the process <i>(A copy of a current safety data sheet is available.)</i>	Showtec Smoke Fluid		
<b>Classification (state the category of danger)</b>			
 <input type="checkbox"/> Very Toxic	 <input type="checkbox"/> Irritant-dermatitis causing	 <input type="checkbox"/> Extremely Flammable	
 <input type="checkbox"/> Toxic	 <input type="checkbox"/> Sensitising	 <input type="checkbox"/> Highly Flammable	
 <input type="checkbox"/> Corrosive	 <input type="checkbox"/> Biological	 <input type="checkbox"/> Flammable	
 <input type="checkbox"/> Harmful-lung damage if swallowed	 <input type="checkbox"/> Oxidising	 <input type="checkbox"/> Environmental -aquatic organisms	
<b>Hazard Type</b>			
<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Vapour	<input type="checkbox"/> Mist	<input type="checkbox"/> Fume
<input type="checkbox"/> Dust	<input type="checkbox"/> Liquid	<input type="checkbox"/> Solid	<input type="checkbox"/> Other (State):
<b>Route of Exposure</b>			
<input checked="" type="checkbox"/> Inhalation	<input type="checkbox"/> Skin	<input type="checkbox"/> Eyes	<input type="checkbox"/> Ingestion
<input type="checkbox"/> Other (State):			
<b>Workplace Exposure Limits (WELs) please indicate n/a where not applicable</b>			
Long-term exposure level (8hrTWA): N/A	Short-term exposure level (15 mins): N/A		
<b>Risks to Health from Identified Hazards: Note appropriate Risk Phrases</b>			
The product does not present any health related dangers.			
<b>Control Measures: Note engineering, PPE, ventilation and other requirements needed</b>			
None required.			
<b>Safety Phrases: N/A</b>			

Is health surveillance or monitoring required? Yes  No

**Personal Protective Equipment (state type and standard)**

 <input type="checkbox"/>		 <input type="checkbox"/>	
Dust mask		Visor	
 <input type="checkbox"/>		 <input type="checkbox"/>	
Respirator		Goggles	
 <input type="checkbox"/>		 <input type="checkbox"/>	
Gloves		Overalls	
 <input type="checkbox"/>		 <input type="checkbox"/>	
Footwear		Other	

**First Aid / Emergency Measures**

**Inhalation :** In the event of considerable inhalation, take the patient into the open air and keep him/her warm and calm. If breathing is irregular or has stopped, use artificial respiration and consult a doctor. If the person is unconscious, place him/her in the lateral recovery position and call an ambulance.

**Skin :** Take off the stained clothes and wash the skin immediately with copious amounts of water for 10 to 15 minutes. Clothes can only be reused after they have been cleaned. If irritation appears or if the contamination is extensive and prolonged, consult a doctor.

**Eyes :** Rinse immediately and wash copiously with fresh, clean water for 15 minutes and keep the eyelids separated. Take the subject to an ophthalmologist, especially if he appears flushed, in pain or is in discomfort.

**Ingestion :** Keep calm. Do not make yourself sick. In the event of accidental ingestion, call a doctor to judge if supervision is needed and, if need be, subsequent treatment in hospital. Show the label.

**Significant Spillage :** See section 6 of MSDS that follows.

**Fire :** Recommended extinguishing methods are carbon dioxide, and chemical powders and foams.

**Storage: Note type of storage required**

No special requirements.

**Disposal of Substances & Contaminated Containers**

Hazardous Waste  Put Down Drain  General Skip   
 (If Other Please State):

Is exposure adequately controlled? Yes  No

**Risk Rating Following Control Measures**

High  Medium  Low

Assessed by: William Hitchins Position: Technical Manager Date: 6/12/15

# SAFETY INFORMATION SHEET

## 1 – IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/BUSINESS

Preparations:

**Name: SHOWTEC SMOKE FLUID / SHOWTEC HAZER FLUID named as follows:**

**Fog fluid / Fog fluid light**

**Low smoke fluid**

Company/Business/Laboratory issuing the Safety Information Sheet:

Corporate Name: BRENNTAG SA

Address: 90 Avenue du Progrès – F-69680 CHASSIEU – FRANCE

Telephone: +33(0)472.221.600 – Fax: +33(0)478.904.2 73 – Emergency telephone no.: +33(0)800.07.42.28

Company/Business/Manufacturer of chemical preparations:

Corporate Name:

Address:

Telephone:

French Safety Information Sheet Control Body: INRS – Tel: +33(0)145.425.959

Normal use:

Enables artificial smoke to be created in the air, after being passed through a generator.

## 2 – COMPOSITION/INFORMATION ON THE COMPONENTS

Components contributing to danger: (present in the preparation at a concentration sufficient to give it the toxicological characteristics it would have had in its 100% pure state).

INDEX 603-140-00-6 CAS 111-46-6 - CE 203-872-2 - 2,2'-OXYDIETHANOL - Concentration < 25 % - Xn R: 22

Other hazardous substances:

There is no known substance of this category.

Substances present at a concentration lower than the minimal danger threshold:

There is no known substance of this category.

Other substances which have Occupational Exposure Limit Values:

There is no known substance of this category.

## 3 – IDENTIFICATION OF THE DANGERS

The product does not present any health-related dangers.

## 4 – FIRST AID

In general, if in doubt or if symptoms persist, always consult a doctor.

NEVER make an unconscious person ingest anything.

### **In the event of exposure through inhalation:**

In the event of considerable inhalation, take the patient into the open air and keep him/her warm and calm.

If breathing is irregular or has stopped, use artificial respiration and consult a doctor.

If the person is unconscious, place him/her in the lateral recovery position and call an ambulance.

### **In the event of splashing or contact with the eyes:**

Rinse immediately and wash copiously with fresh, clean water for 15 minutes and keep the eyelids separated.

Take the subject to an ophthalmologist, especially if he appears flushed, in pain or is in discomfort.

**In the event of splashing or contact with the skin:**

Take off the stained clothes and wash the skin immediately with copious amounts of water for 10 to 15 minutes.

Clothes can only be reused after they have been cleaned.

If irritation appears or if the contamination is extensive and prolonged, consult a doctor.

**In the event of ingestion:**

Keep calm. Do not make yourself sick.

In the event of accidental ingestion, call a doctor to judge if supervision is needed and, if need be, subsequent treatment in hospital. Show the label.

**5 – FIRE-FIGHTING MEASURES**

**Appropriate extinguishing methods:**

Cool down containers exposed to fire by spraying them with water.

Recommended extinguishing methods are carbon dioxide, and chemical powders and foams.

**Extinguishing methods NOT to be used:**

Avoid spraying water directly on the storage container to avoid the product overflowing.

Prevent fire-fighting waste from penetrating sewers or drains.

Not advised: extinguishing fire with a jet-powered water hose.

**Special equipment for firefighters:**

Fire-fighters should use self contained respiratory protective equipment.

**Particular risks:**

Possibly, and if organic materials are present, a fire could produce thick black smoke. Exposure to decomposition products could provoke risks for health. Do not inhale smoke.

**6 – PRECAUTIONS TO TAKE IN THE EVENT OF ACCIDENTAL SPILLAGE**

**Individual precautions:**

Please refer to the precautions listed under headings 7 and 8.

If large amounts are spilt, evacuate staff, and only allow trained operators who have protection equipment intervene.

Avoid inhaling the fumes. Avoid all contact with the eyes and the skin.

**Precautions for the protection of the environment:**

Prevent any waste from getting into sewers and drains. If the product contaminates underground water levels, rivers or sewers, alert the relevant authorities, according to the regulatory procedures.

**Methods of cleaning:**

Restrict and collect leaks with non combustible absorbent materials, for example: sand, earth, vermiculite and diatom earth in barrels, with a view to eliminating the waste.

Place the waste eliminating barrels recovered according to current regulations (see heading 13).

**7 – HANDLING AND STORAGE**

Precautions relating to storage premises are applicable to workshops where the product is handled.

**Handling:**

Handle in well ventilated areas.

Do not inhale the fumes.

Avoid contact with the eyes.

**Prevention of fires:**

Prohibit access to non-authorized persons.

Do not smoke.

**Recommended equipment and procedures:**

For individual protection, see paragraph 8.  
Follow the precautions indicated on the label as well as the work safety regulations.  
Opened packages should be carefully closed up and preserved, preferably, in a vertical position.

**Prohibited equipment and procedures:**

Smoking, eating and drinking in premises where the preparation is used are prohibited.  
Never forceably open packages.  
Do not recycle containers before washing and emptying them.  
Wearing contact lenses is not recommended.

**Storage:**

Ensure the container is firmly closed and is kept in a dry place.  
Keep away from food and drink, including food and drink for animals.  
The premises' floor should be impermeable and form a retention basin in the event of an accidental spillage; the liquid should not spread to the outside.  
Glass can be used for small quantities. In this event, carboys will be protected by a suitably adjusted highly resistant metallic wrapping.  
Keep away from any ignition source, heat, or any incompatible materials (see chapter 10).  
Store in stainless steel, zinc and aluminium containers.

**8 – CONTROL OF EXPOSURE / INDIVIDUAL PROTECTION**

**Technical precautions:**

Ensure there is adequate ventilation, if possible, by aspiration at workstations and by suitable general extraction.  
If this ventilation is insufficient to ensure that the concentrations of solvent fumes are maintained under the exposure limit values, wear respiratory equipment.  
Regularly check the atmosphere.  
Keep premises and workstations perfectly tidy, and clean frequently. Observe very strict personal hygiene.

Exposure limit values according to INRS ND 2098-174-99 and ND 2114-176-99:

For more details, see paragraph 11 of the FDS – Toxicological Information.

France 111-46-6	VME-ppm: -	VME-mg/m3: -	VLE-ppm: -	VLE-mg/m3: -	Notes: -	TMP N°: -
Germany 111-46-6	Category: II,2	MAK-ppm: 10	MAK-mg/m3: 44	Notes: C	Notes:	
ACGIH(TLV) 111-46-6	TWA-ppm: -	TWA-mg/m3: -	STEL-ppm: -	STEL-mg/m3: -	Notes: -	Notes: -

**Respiratory Protection Equipment:**

When workers are confronted with concentrations which are higher than the exposure limits, they must wear appropriate and suitable masks (with filter A cartridges).

**Protection of the hands:**

Wear gloves (rubber, butyl or PVC).

**Protections of the eyes and face:**

Wear safety goggles.  
Provide eye wash fountains and safety showers in workshops where the preparation is handled.

**Protection of the skin:**

Wear appropriate protective clothing which should be kept clean and in a good condition.

## **9 – PHYSICAL AND CHEMICAL PROPERTIES**

Density: > 1

Acid-Base Character of the preparation: Not applicable

Solubility of the preparation in water: Soluble.

Vapour tension of the volatile components at 50 °C: less than 110kPa (1.10 bar).

Appearance: Fluid Liquid.

Flash Point Interval: not applicable

Ph measuring is not possible or its value is: not applicable

Explosion temperature: not determined.

Decomposition temperature: not determined.

Melting temperature interval: not determined.

Average distillation temperature of the contained solvents: not determined.

### **Other data:**

Presented in the form of a clear liquid, which is slightly volatile, practically odourless and somewhat sticky.

Distillation interval: 100- 250 °C

Density at 20 °C : 1.02 – 1.05

Flash Point: > 124 °C

Explosive mixture in the air within 1.6 to 112.6% in volume.

Self-inflammation temperature > 229 °C

## **10 - STABILITY AND REACTIVITY**

The preparation is stable in the normal conditions of use described in paragraph 7.

### **Materials to avoid:**

Violent reactions with oxidants.

Explosive reactions with acids and strong bases.

## **11 – TOXICOLOGY**

### **In the event of exposure through inhalation:**

Irritation of the airways.

### **In the event of ingestion:**

Provokes nausea, vomiting, abdominal pains and diarrhea.

After ingesting large quantities: breakdown of the central nervous system, headaches, dizziness, intoxication, narcosis and loss of consciousness.

### **In the event of splashing or contact with the skin:**

Prolonged or repeated contact can lead to a delipidation of the skin and cause irritation or dermatitis.

### **In the event of splashing or contact with the eyes:**

Slight irritation.

## **12 - BIODEGRADABILITY**

Any flowing of the product into sewers or drains should be avoided.

### **Persistence and degradability:**

Biographical data: easily biodegradable: 67 % after 28 days.

### **Aquatic toxicity:**

Biographical data:

FISH - CL50 (96 h) > 10000 mg/l, DAPHNIA - CL50 (24 h) > 10000 mg/l

### **13 – CONSIDERATIONS RELATING TO ELIMINATION**

Do not pour the product into sewers or drains.

**Waste:**

Recycle or eliminate in conformance with current legislations, preferably using a collector or an accepted business.

Do not contaminate the earth or water with waste; do not eliminate waste in the environment.

**Polluted packaging:**

Completely empty the container. Keep the label(s) on the container. Hand over to an accepted eliminator.

**Local dispositions:**

The regulation relating to waste is set out in the ENVIRONMENT CODE, according to Statute no. 2000-914 of 18 September 2000 relating to the Legislative part of the environment code. Different texts can be found in Article L. 5411 to Article L. 541-50 found in Book V (Prevention of pollution, risks and harmful effects), Heading IV (Waste), Chapter I (Eliminating waste and recovering material).

Waste codes (Decision 2000/532/EC, Directive 75/442/EEC, Directive 91/689/EEC relating to hazardous waste):

### **14 – INFORMATION RELATING TO TRANSPORT**

Exempt from transport grading and labelling.

### **15 – REGULATORY INFORMATION**

The classification of this preparation has been carried out in conformance with the <All Preparations> directive. It has also taken into account directive 2001/59/EC relating to the 28<sup>th</sup> adaptation of directive 67/548/EC (Dangerous Substances).

**Classification of the Preparation: Not applicable.**

Content of the Preparation: Not applicable.

**Particular dispositions:**

Nomenclature of classified installations. (France) (For Quality read Total Quality present in the installation)  
No. 1510 = Storing materials, products or combustible substances in a volume higher than 500 T in covered warehouses. If the volume of the warehouses  $\geq 50\,000\text{ m}^3$ , Authorisation Regime and Display Area: 1 km;  
if the volume of warehouses  $\geq 5000\text{ m}^3$  but  $< 50\,000\text{ m}^3$ , Declaration Regime.

Table of occupational diseases set out in article R, 461-3 of the Employment Code: Not applicable.

### **16 – OTHER INFORMATION**

The information given in this sheet must be considered as a description of the safety requirements relating to our product and not as a guarantee of its properties.

This sheet complements the technical use instructions but does not replace them. The information contained is based on the state of our knowledge relative to the product concerned at the date indicated. It is given in good faith. The attention of the user is in addition drawn to the possible risks run when the product is used for purposes other than those for which it is designed.

In no case does this exempt the user from his duty to know and apply all rules governing his activity. He is solely responsible for the precautions he takes linked to his use of this product.

All the regulatory precautions mentioned simply aim to aid the user to fulfil the obligations he will be incumbent upon when he uses the hazardous product. This list should not be considered as exhaustive and does not exonerate the user from ensuring that possibly other obligations will be incumbent upon him due to the other texts that are cited concerning the storage and handling of the product for which he is solely responsible.