

MATERIAL SAFETY DATA SHEET

according to EU Directive 93/112/EC

FIRE RETARDANT EXPANDING FOAM

Version: 2

Print date: 24.5.04

**1. Identification of Substance/Preparation and Company**

Product Name Fire retardant Expanding foam
Company Biokil Crown Ltd
7 Stadium Ind Park, Long Eaton
Nottingham, NG10 2DD
Telephone 0115 946 0060
Fax 0115 946 9767
Emergency Telephone 07967 10 71 95

2. Composition / Information on ingredients

Chemical characterization: Polyurethane foam based on polyurethane prepolymer.
propellant: propane/butane mixture and dimethylether.

Hazardous ingredients:	CAS-No	Weight-%	Danger Symbol	Risk Phrases
Diphenylmethane-4,4'-diisocyanate	9016-87-9	30-60	Xn	20-36/37/38-42/43
Mixture of propane (propellant) and butane (propellant)	74-98-6 F+ 12			
Dimethylether (proppelant)	106-97-8	1-15	F+	12
	115-10-6	1-15	F+	12

3. Hazards identification

Potential health effects : Contains diphenylmethane-4,4'-diisocyanate. Harmful by inhalation, swallowing and skin contact.
Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. In case of very sensitive persons low concentrations can cause asthmatic reactions. During use formation of explosive vapor-oxygen mixtures are possible especially on the ground.

4. First aid measures

Eyes : In case of contact flush eyes immediately with plenty of water for at least 15 minutes. Lift eyelids and rinse well underneath them. Get medical attention if irritation persists.

Mouth (ingestion): Rinse mouth with water several times. Consult a physician and show this Safety Data Sheet.

Lungs (inhalation): Fresh air and rest. Get medical attention if complaint persists.

Skin: Remove completely with a dry cloth or paper towel, before washing with detergent and water. Get medical attention if irritation persists.

Clothes: Remove polluted clothing.

5. Fire fighting measures

Suitable extinguishing media: CO₂, powder, foam and water spray.
Unsuitable extinguishing media: Water beam.
Special firefighting procedures: Wear protective clothing and breathing apparatus. Remove unexposed containers from the danger area. Cool with water, container may burst.

6. Accidental release measures

Environmental precautions: Keep away from drains and watercourses.
Clean up procedures: Wipe, scrape or soak up in inert material and put in a container for disposal.
Personal precautions: Wear proper protective equipment as described in the 'eye and skin protection' section of chapter 8.

MATERIAL SAFETY DATA SHEET

according to EU Directive 93/112/EC

FIRE RETARDANT EXPANDING FOAM

Version: 2

Print date: 24.5.04

**7. Handling and storage**

Handling: Handle in well-ventilated area. Avoid contact with skin, eyes and do not swallow.

Storage: Store in closed packing between 5/C and 25/C away from direct sunlight and other sources of heat.

8. Exposure controls / personal protection

Occupational exposure limit: MAC-TLV propane/butane: 1000 ppm, dimethylether: 1000 ppm. MAC-TLV diphenylmethane-4,4'-diisocyanate: 0,005 ppm.

Respiratory protection: Avoid breathing the vapor. Maintain good ventilation.

Eye and skin protection: Avoid contact with skin and eyes. Wear safety glasses.

Industrial hygiene: When using do not eat, drink or smoke. Wash hands after work and before breaks. Don't rub eyes with dirty hands.

9. Physical and chemical properties

Physical state: aerosol

Color: pink

Odor: odorless

Density (water=1): NA g/ml

pH (water=7): NA

Boiling point (water =100): NA /C

Freezing point (water = 0): NA /C

VOC-content (container): 700ml: 59,3g

Flash point: NA /C

Lower explosion limit: NA vol-%

Upper explosion limit: NA vol-%

Ignition temperature: >300 /C

Vapor pressure (20/C): 5,5 bar

Mixable with water: no

Mixable with organic solvents: unknown

10. Stability and reactivity

Hazardous decomposition products: none at appropriate use.

Materials to avoid: unknown

Conditions to avoid: Keep away from sources of ignition. Container may burst when heated.

11. Toxicological information

Product information	<u>MDI</u>	<u>Butane</u>	<u>Dimethylether</u>
Acute oral LD50 (mg/kg):	10000	unknown	unknown (rat)
Acute dermal LD50 (mg/kg):	unknown	unknown	unknown
Acute inhalation LC50 (mg/l):	unknown	658	386 (rabbit)

Other information:

For information on hazardous substances see 'chapter' 2.

12. Ecological information

Avoid uncured product will come in the environment.

Degradability: unknown

Ecotoxicity: unknown

WGK: 1 (self-assesment)

13. Disposal considerations

Dispose in accordance with federal, state and local legislation.

Waste code empty cans (Germany): 15 01 99D1**Waste code cured product (Germany):** 20 01 06**14. Transport information****By sea according GGVSee/IMDG-Code:** Class: 2.2, page: 2102, EmS: 2-13, MFAG: 370**By land according RID/ADR/GGVS/GGVE:** Class: 2, letter: 5A**By air according ICAO/IATA-DGR:** Class: 2.2, packing group: II, Pkg-Notes: Pass. 203/75 kg, Cargo: 203/150 kg.**UN-number:** 1950**Proper shipping name:** Aerosols

MATERIAL SAFETY DATA SHEET

according to EU Directive 93/112/EC

FIRE RETARDANT EXPANDING FOAM

Version: 2

Print date: 24.5.04

**15. Regulatory information**

This product is not subject to the labelling requirements of EC Directives 67/548/EC and 88/379/EC as amended.

Danger symbol:

F+, Xn

Contains:

Diphenylmethane-4,4'-diisocyanate, isomers and homologues.

R-phrases:

12-20-36/37/38-42/43

S-phrases:

2-26-28-38-45

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50/C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of reach of children. In use, may form flammable/explosive vapor-air mixture.

16. Other Information

This product safety data sheet conforms to EC Directive 91/155/EEC as well as its amendments.

This data is offered in good faith as typical values and not as product specifications. No warranty either expressed or implied, is hereby made.

The recommended industrial and safe handling procedures are believed to be generally applicable, each user should review the recommendations in the specific context of the intended use and determine whether they are appropriate.

NA : Not Applicable