



MATERIAL SAFETY DATA SHEET

Based on Regulation (EC) No. 1907/2006 (REACH) Article 31 Annex II

Hand Held and Gun Applied B2 Fire Rated Foam

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

1.1 Identification of the substance or preparation

Not applicable

1.2 Use of the substance/preparation

Polyurethane foam

1.3 Company/undertaking preparation

JCP Construction Products
Unit 07 Princess Court, Horace Rd.
Kingston, Surrey KT1 2SL
Tel +44 208 546 6545
Fax +44 208 546 6019

1.4 Telephone number for emergencies

+44 208 546 6545

2. Hazards identification

Extremely flammable
Harmful by inhalation
Irritating to eyes, respiratory system and skin
May cause sensititation by inhalation and skin contact

3. Composition/information on ingredients

Hazardous Ingredients	CAS No. EINECS No.	Conc. In %	Hazard symbol	Risks (R-phrases)
polymethylenepolyphenylisocyanate	9016-87-9 -	> 20	Xn	20-36/37/38-42/43
dimethyl ether	115-10-6 204-065-8	1 - 10	F+	12 (1)
isobutane	75-28-5 200-857-2	1 - 10	F+	12 (1)

4. First aid measures

4.1 Eye contact

Rinse immediately with plenty of water
Seek medical advice

4.2 Skin contact

Rinse immediately with plenty of water
If irritation persists seek medical advice

4.3 After inhalation

Remove the victim to fresh air
Seek medical advice

4.4 After ingestion

Never give water to an unconscious person
Do not induce vomiting
Seek medical advice

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5. Fire-fighting measures

5.1 Suitable extinguishing media

Quantities of water
Polyvalent foam
BC powder
Carbon dioxide

5.2 Unsuitable extinguishing media

None

5.3 Special exposure hazards

On burning: release of toxic and corrosive gases/vapours: phosphorous oxides, hydrogen chloride, carbon monoxide and carbon dioxide
Gas/vapours spread at floor level: ignition hazard
Gas/vapour flammable with air within explosion limits
Aerosol may explode under the effect of heat

5.4 Instructions

Dilute toxic gases with water spray
Take account of toxic firefighting water
Do not move the load if exposed to heat

5.5 Special protective equipment for firefighters

Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions

See headings 8.1/8.3/10.3

6.2 Environmental precautions

Use appropriate containment to avoid environmental contamination

6.3 Method of clean up

Allow product to solidify and remove by mechanical means
Remove uncured foam with acetone

7. Handling and storage

7.1 Handling

Observe very strict hygiene - avoid contact
In case of insufficient ventilation keep naked flames/sparks away
Remove contaminated clothing immediately
Clean contaminated clothing

7.2 Storage

Keep out of direct sunlight
Store in a cool area
Store in a dry area
Keep away from heat sources, ignition sources, acids, bases

Storage temperature	: < 50	°C
Quantity limit	N.D.	kg
Storage life	365	days
Material for packaging	suitable :aerosol dispenser	

7.3 Specific use

See Technical Data Sheet

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8. Exposure controls / Personal protection

8.1 Exposure limit values

POLYMETHYLENEPOLYPHENYLISOCYANATE

TLV-TWA	: -	mg/m ³	-	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
MEL-LTEL	: 0.02 (-NCO)	mg/m ³	-	ppm
MEL-STEL	: 0.07 (-NCO)	mg/m ³	-	ppm
MAK	: -	mg/m ³	-	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

DIMETHYL ETHER

TLV-TWA	: -	mg/m ³	-	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	:	mg/m ³	400	ppm
OES-STEL	:	mg/m ³	500	ppm
MAK	: 1900	mg/m ³	1000	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 950	mg/m ³		
MAC-TGG 15 min	: 1500	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: 1920	mg/m ³	1000	ppm
EC-STEL	: -	mg/m ³	-	ppm

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ISOBUTANE

TLV-TWA	: -	mg/m ³	-	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	:	mg/m ³	-	ppm
OES-STEL	:	mg/m ³	-	ppm
MAK	: 2400	mg/m ³	1000	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	ppm
GWK-15 min	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

8.2 Exposure controls

8.2.1 Occupational exposure controls

Use only in a well ventilated area

8.2.2 Environmental exposure controls

See section 13

8.3 Personal protection

8.3.1 Respiratory protection

In case of insufficient ventilation use respiratory protection with filter type A

8.3.2 Hand protection

Chemically resistant gloves

8.3.3 Eye protection

Safety glasses

8.3.4 Skin protection

Suitable protective clothing

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9. Physical and chemical properties

9.1 General information

Appearance (at 20°C)	Aerosol
Odour	Characteristic
Colour	Variable

9.2 Important health, safety and environmental information

pH value	N.D.	
Boiling point/boiling range	N.D.	°C
Flashpoint	Contains extremely flammable components	
Explosion limits	N.D.	Vol%
Vapour pressure (at 20°C)	N.D.	hPa
Vapour pressure (at 50°C)	N.D.	hPa
Relative density (at 20°C)	N.D.	
Water solubility	Insoluble	
Soluble in	Organic solvents	
Relative vapour density	N.D.	
Viscosity (at 20°C)	N.D.	Pa.s
Partition coefficient n-octanol/water	N.D.	
Evaporation rate		
ratio to butyl acetate	N.D.	
ratio to ether	N.D.	

9.3 Other information

Melting point/melting range	N.D.	°C
Auto-ignition point	N.D.	°C
Saturation concentration	N.D.	g/m ³

10. Stability and reactivity

10.1 Conditions to avoid/reactivity

Unstable on exposure to heat

10.2 Materials to avoid

keep away from heat sources, ignition sources, acids, bases

10.3 Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours: phosphorous oxides, hydrogen chloride, carbon monoxide, carbon dioxide.

On heating release of toxic/combustible gases/vapours (hydrogen cyanide)

May Polymerize on exposure to temperature rise

May polymerize with a lot of compounds, i.e. (strong) bases and amines

Reacts violently with (some) acids/bases

11. Toxicological Information

11.1 Acute toxicity

POLYMETHYLENE POLYPHENYL ISOCYANATE

LD50 oral rat	:	>10000	mg/kg
LD50 dermal rabbit	:	N.D.	mg/kg
LD50 dermal rabbit	:	>5000	mg/kg
LC50 inhalation rat	:	N.D.	mg/1/4/h
LC50 inhalation rat	:	N.D.	ppm/4h

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ISOBUTANE

LD50 oral rat	:	N.D	mg/kg
LD50 dermal rabbit	:	N.D	mg/kg
LD50 dermal rabbit	:	N.D	mg/kg
LC50 inhalation rat	:	658	mg/1/4/h
LC50 inhalation rat	:	N.D	ppm/4h

11.2 Chronic toxicity

POLYMETHYLENE POLYPHENYL ISOCYANATE

EC carc. Cat.	:	not listed
EC muta. Cat.	:	not listed
EC repr. Cat.	:	not listed
Carcinogenicity (TLV)	:	not listed
Carcinogenicity (MAC)	:	not listed
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	category 3B
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	Group -
IARC classification	:	3

DIMETHYL ETHER

EC carc. Cat.	:	not listed
EC muta. Cat.	:	not listed
EC repr. Cat.	:	not listed
Carcinogenicity (TLV)	:	not listed
Carcinogenicity (MAC)	:	not listed
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	not listed
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	Group D
IARC classification	:	Not listed

11.3 Routes of exposure Inhalation, eyes and skin

11.4 Acute effects/symptoms (upon over exposure)

AFTER INHALATION

Dry / sore throat
Coughing
Irritation of the respiratory tract
Irritation of the nasal mucous membrane
Runny nose

FOLLOWING SYMPTOMS MAY OCCUR LATER

Inflammation of the respiratory tract
Risk of lung oedema
Respiratory difficulties

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AFTER SKIN CONTACT

Tingling / irritation of the skin

AFTER INGESTION

Irritation of the gastric / intestinal mucosa

Inhibition of enzym production

AFTER EYE CONTACT

Irritation of the eye tissue

Lacrimation

11.5 Chronic effects

May cause sensititation by skin contact

May cause sensititation by inhalation

Contains substances with certain carcinogenic properties

(polymethylenepolyphenylisocyanate)

ON CONTINUOUS EXPOSURE

Body temperature rise

Tremor

Feeling of weakness

headache

Skin/rash / inflammation

May stain the skin

Dry skin

Risk of pneumonia

12. Ecological information

12.1 Ecotoxicity

No data available

12.2 Mobility

Volatile organic compound (VOC) : 18%

Insoluble in water

For other physiochemical properties see section 9

12.3 Persistence and degradability

Biogredation (BOD)	:		N.D.	%ThOD
water	:		No data available	
soil	:	T_{1/2}	N.D.	days

12.4 Bioaccumulative potential

log P_{cw} : N.D.

BCF : N.D.

12.5 Other adverse effects

WGK : Classification in compliance with
Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)
of 17 May 1999

Effects on the Ozone layer Not dangerous to the Ozone layer (1999 / 45 / EC)

Greenhouse effect No data available

Effect on waste water purification No data available

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13. Disposal considerations

13.1 Provisions relating to waste

Waste material code (91/689/EEC, Council Decision 2001/118/ec, O.J. L47 of 16/2/2001: 08 05 01*
(waste isocyanates)
Hazardous waste (91/689/EEC)

13.2 Disposal methods

Specific treatment
Do not discharge into surface water

13.3 Packaging

Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15
01 10* 9 (packaging containing or contaminated by dangerous substances)

14. Transport information

14.1 Classification of the substance in compliance with UN recommendations

UN number	:	1950
CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	-
PROPER SHIPPING NAME	:	UN1950, Aerosol
14.2 ADR (Transport by road)	:	
CLASS	:	2
CLASSIFICATION CODE	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGING	:	2.1
14.3 RID (Transport by rail)	:	
CLASS	:	2
CLASSIFICATION CODE	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGING	:	2.1
14.4 ADNR (Transport by inland waterway)	:	
CLASS	:	2
CLASSIFICATION CODE	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGING	:	2.1
14.5 IMDG (Maritime transport)	:	
CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	-
MFAG	:	-
EMS	:	F-D, S-U
Marine pollutant	:	-
14.6 ICAO (Air transport)	:	
CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	-
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:	203/Y203
PACKING INSTRUCTIONS CARGO AIRCRAFT	:	203
14.7 Special precautions in connections with transport	:	None
14.8 Limited quantities (LQ)	:	

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4 **only** the following prescriptions shall be complied with:

Each package shall display a diamond shaped figure with the following inscription: UN 1950, or in the case of different goods with different identification numbers within a single package: the letter 'LQ'

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15. Regulatory information

Labelling is in accordance with directives 67/548/EEC and 1999/45/EC



- Contains : polymethylenepolphenylosocyanate
- R20 : Harmful by inhalation
R36/37/38 : Irritating to eyes, respiratory system and skin
R42/43 : May cause sensititation by inhalation and skin contact
- S23 : Do not breath spray
S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection
S38 : In case of insufficient ventilation wear respiratory equipment
S45 : In case of accident or if you feel unwell, seek medical advice
(Show the label or this sheet if possible)
- Keep away from sources of ignition - No smoking
Keep out of reach of children
Pressurized contained. Protect from sunlight and do not expose to temperatures exceeding 50°C
Do not pierce or burn after use
Do not spray on a naked flame or any incandescent material
- Contains isocyanates. See information supplied by the manufacturer.

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16. Other information

The above information has been compiled from that provided by our suppliers and other sources. None of the original information relating to hazards or potential hazards has been omitted and so the absence of a particular reference merely implies either that such information has not been determined or that it is not applicable. Should amendments become necessary, these will be published in future issues. The above information is furnished without warranty of any kind. Users should consider this data only as a supplement of other information gathered by them and make independent determination of suitability and completeness of information from all sources to ensure proper use and disposal of these materials and the safety of employees and customers.

N.A. = Not Applicable
N.D. = Not Determined
***** = Internal Classification

Full text of any R-phrases referred to under heading 2:

R12 : Extremely Flammable
R20 : Harmful by inhalation
R36/37/38 : Irritating to eyes, respiratory system and skin
R42/43 : May cause sensitization by inhalation and skin contact

Exposure Limits

TLV : Threshold Limit Value - ACGIH US 2002
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - the Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à courte terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 2002
GWK : Grenswaarde kortstondige blootstelling - Belgium 2002
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalation Fraction **T** : Total dust **E** : Einatembarer Aerosolanteil
R : Respirable Fraction **A** : Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a : aerosol **r** : rook/Rauch (fume)
d : damp (vapour) **st** : stof/Staub (dust)
du : dust **ve** : vezel (fibre)
fa : fibre **va** : vapour
fi : fibre **om** : oil mist
p : poussière (dust) **part** : particles

Chronic toxicity

K : List of the carcinogenic substances and processes - The Netherlands 2002