

SAFETY DATASHEET

Based on Directive 91/155/EEC at seq. of the
Commission of the European Communities

1K-PU-Keraflex Glue

1. Identification of the substance/preparation and the company

1.1 Identification of the substance or preparation:

CAS no. : N.A.
EC index no. : N.A.
EINECS no. : N.A.
RETCS no. : N.A.
NFPA code : N.D.
Molecular weight : N.A.
Formula : N.A.

1.2 Company/undertaking identification:

BSW
Berleburger Schaumstoffwerk GmbH
Am Hilgenacker 24
D-57319 Bad Berleburg

2. Composition/information on ingredients

Hazardous ingredients	CAS no.	Conc. in %	Hazard symbol	Risks (R-phrases)
xylene, mixture of isomers	1330-20-7	< 12.5	Xn	10-20/21-38
diphenylmethane-4,4'-di-isocyanat	101-68-8	0.1 - 1	Xn	20-36/37/38-42/43

3. Hazards identification

- Flammable
- May cause sensitization by inhalation

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 into 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:

- Polyvalent foam
- Dry chemical powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:

- None

5.3 Special exposure hazards:

- On burning: release of toxic and corrosive gases/vapours: sulphur oxides, carbon monoxide and carbon dioxide
- Gas/vapour flammable with air within explosion limits
- Gas/vapour spreads at floor level: ignition hazard

5.4 Instructions:

- Cool drums with water spray
- Precipitate toxic vapours with water spray

5.5 Special protective equipment for firefighters:

- Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection: see 8.3

6.2 Environmental precautions:

- Use appropriate containment to avoid environmental contamination

6.3 Clean-up:

- Take up liquid spill into absorbent material e.g.: sand/earth
- Take collected spill to competent authority
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:

- Observe very strict hygiene - avoid contact
- In case of insufficient ventilation: keep naked flames/sparks away
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:

- Keep container tightly closed
- Store in a cool area
- Store in a dry area

- Keep away from: heat sources, ignition sources

Storage temperature: N.D. °C

7.3 Materials for packaging:

- suitable : aluminium

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8. Exposure controls/Personal protection

8.1 Recommended engineering controls:
- Use only in well ventilated area

8.2 Exposure limits:

XYLENE, MIXTURE OF ISOMERS:

TLV-TWA	: -	mg/m ³	100	ppm
TLV-STEL	: -	mg/m ³	150	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: 441	mg/m ³	100	ppm
OES-STEL	: 662	mg/m ³	150	ppm
MEL-LTEL	: -	mg/m ³	-	ppm
MEL-STEL	: -	mg/m ³	-	ppm
MAK	: 440	mg/m ³	100	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 210	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: 435	mg/m ³	100	ppm
VLE-15 min.	: 650	mg/m ³	150	ppm
GWBB-8 h	: 440	mg/m ³	100	ppm
GWK-15 min.	: 660	mg/m ³	150	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: 221	mg/m ³	50	ppm
EC-STEL	: 442	mg/m ³	100	ppm

8.3 Personal protection:

eye protection:

- Safety glasses

hand protection:

- Chemically resistant gloves

skin protection:

- Suitable protective clothing

respiratory protection:

- In case of insufficient ventilation: respiratory protection with filtertype A

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9. Physical and chemical properties

9.1 Appearance (at 20°C)	:	Liquid, viscous	
9.2 Odour	:	Solvent	
9.3 Colour	:	Variable in colour	
9.4 pH value	:	N.D.	
9.5 Boiling point/boiling range	:	N.D.	°C
9.6 Melting point/melting range	:	N.D.	°C
9.7 Flashpoint	:	25	°C
9.8 Auto-ignition point	:	N.D.	°C
9.9 Explosion limits	:	N.D.	Vol%
9.10 Vapour pressure (at 20°C)	:	N.D.	hPa
9.11 Relative density (at 20°C)	:	1.2	
9.12 Water solubility	:	Insoluble	
9.13 Soluble in	:	N.D.	
9.14 Relative vapour density	:	> 1	
9.15 Saturation concentration	:	N.D.	g/m ³
9.16 Viscosity	:	N.D.	Pa.s

10. Stability and reactivity

10.1 Stability:

- Stable under normal conditions

10.2 Reactivity/Hazardous decomposition products:

- On burning: release of toxic and corrosive gases/vapours: sulphur oxides, carbon monoxide and carbon dioxide

10.3 Conditions/materials to avoid:

- Heat sources, ignition sources

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11. Toxicological information

11.1 Acute toxicity:

XYLENE, MIXTURE OF ISOMERS:

LD50 oral rat	: > 4300	mg/kg
LD50 dermal rabbit	: > 2000	mg/kg
LD50 dermal rabbit	: > 1700	mg/kg
LC50 inhalation rat	: 22	mg/l/4 h

DIPHENYLMETHANE-4,4'-DI-ISOCYANAT:

LD50 oral rat	: 9200	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: > 10000	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h

11.2 Chronic toxicity:

XYLENE, MIXTURE OF ISOMERS:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: A4
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	: 3

DIPHENYLMETHANE-4,4'-DI-ISOCYANAT:

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

Obligatory medical control in Belgium (ARAB-RGPT Art. 124):

Group: V	Number: 5.2 (diphenylmethane-4,4'-di-isocyanat)
Group: I	Number: 26.1 (xylene, Mixture of isomers)

11.3 Routes of exposure: ingestion, inhalation, eye and skin

11.4 Acute effects/symptoms:

- Practically non-toxic

AFTER INHALATION:

ON CONTINUOUS EXPOSURE/CONTACT:

- Headache
- Nausea
- Dizziness
- Narcosis

AFTER INGESTION:

AFTER ABSORPTION OF HIGH QUANTITIES:

- Symptoms similar to those listed under inhalation

AFTER SKIN CONTACT:

- Slightly irritant to skin

AFTER EYE CONTACT:

- Slightly irritant to eyes

11.5 Chronic effects:

- May cause sensitization by inhalation
- Contains substance with uncertain teratogenic properties (xylene)

ON CONTINUOUS EXPOSURE/CONTACT:

- Respiratory difficulties

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12. Ecological information

12.1 Mobility:

- Volatile organic compounds (VOC): 10 - 13 %
- Insoluble in water

12.2 Biodegradation:

- | | | | |
|---------|------------------|--------|-------------------------------|
| - soil: | T ½ | : N.D. | days |
| | BOD ₅ | : N.D. | g O ₂ /g substance |
| | COD | : N.D. | g O ₂ /g substance |
- Water: - No data available

12.3 Bioaccumulation:

- log P_{ow} : N.D.
- BCF : N.D.

12.4 Aquatic toxicity:

XYLENE, MIXTURE OF ISOMERS:

- LC50 (96 h) : 3.77 mg/l (SALMO GAIRDNERI/ONCORHYNCHUS MYKISS)
- LC50 (48 h) : 3.82 mg/l (DAPHNIA MAGNA)
- EC50 (336 h) : 72 mg/l (SELENASTRUM CAPRICORNUTUM)

12.5 Other information:

- WGK: 2 (004)
- Effect on the ozone layer (Council Regulation (EC) No 3093/94): none
- Waste water purification: N.D.

13. Waste disposal considerations

13.1 Provisions relating to waste:

- Waste code (Germany): 55907
- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09 (waste adhesives and sealants containing organic solvents or other dangerous substances)
- Waste material code (Flanders): 015; 516
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

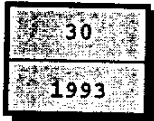
- Landfill or incinerate at an approved site in accordance with national and local regulations
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber

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 (packaging containing residues of or contaminated by dangerous substances)

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14. Transport information



- 14.1 Proper shipping name: UN 1993, Flammable liquid, n.o.s. (Contains: Xylenes)
- 14.2 Transport by road/rail (ADR/RID) : Class 3, 31c
Danger code: 30
Danger labels on tanks : 3
Danger labels on packages : 3
- 14.3 Substance identification number (UN number): 1993
Packing: III
- 14.4 Maritime transport (IMDG code): Class 3 p. 3345 (1998 edit.)
EMS : 3-07
MFAG : 4.2 (1998 edit.)
Marine pollutant : -
- 14.5 Inland navigation (ADNR) : Class 3, 31c)
- 14.6 Air freight (ICAO) : Class 3
Instruction "passenger" : 309/Y309
Instruction "cargo" : 310
- 14.7 Other information:

When substances and their packaging meet the conditions established by ADR/RID marginal 2301a, only the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 1993'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EC (**: see 16):



Harmful

Contains : diphenylmethane-4,4'-di-isocyanate

R10 : Flammable
R42 : May cause sensitization by inhalation

S(02) : (Keep out of reach of children)
S23 : Do not breathe vapour
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)

Contains isocyanate. See information supplied by the manufacturer

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16. Other Information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. =Not applicable
N.D. =NOT DETERMINED
• =INTERNAL CLASSIFICATION
•

(**) Labelling:

The labelling of the substance described in this MSDS complies with the provisions of Directive 1999/45/EC of 31 May 1999, published in the Official Journal of the European Communities L 200 of 30/07/1999. This Directive replaces Directive 88/379/EEC of 7 June 1988, published in the Official Journal of the European Communities L 187 of 16/07/1988.

Member States shall apply the laws, regulations and administrative provisions referred to in article 22 of this Directive:

(a) to preparations not within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2002; and

(b) to preparations within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2004.

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 1999
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2000
TRK : Technische Richtkonzentrationen - Germany 2000
MAC : Maximale aanvaarde concentratie - the Netherlands 2000
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998

Exposure limits:

I : Inhalable fraction = T : Total dust = E : Einatembarer Aerosolanteil
R : Respirable fraction = A : Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a:	aerosol	p:	poussière	(dust)	
d:	damp	(vapour)	r:	rook	(fume)
du:	dust	st:	stof	(dust)	
fa:	Faser	(fibre)	ve:	vezel	(fibre)
fi:	fibre	va:	vapour		
fu:	fume				

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2000

WGK:

001: Internal classification
002: Classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999
003: Classification based on R phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999
004: Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999

MSDS established : 18-09-2000
Reference number : BIG\32947GB_rev03

Reason for revision : Zie: 3 - 6.3 - 9 - 14
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