



82A EPOFIX

Revision:17/11/2005

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Technical Data:

Base	Epoxy
Consistency	paste
Curing System	Chemical curing
Open Time*	Approx. 4 min.
Drying time *	Approx. 10 min.
Temperature Resistance	-20°C to +120°C (cured)

* This varies according to ambient conditions such as temperature, humidity, substrate etc.

Product:

Epofix is a fast curing 2K-Epoxy adhesive.

Characteristics:

- Easy-to-use dual cartridge
- Fast curing
- High strength
- Fast strength development

Applications:

Epofix is suitable for bonding a wide variety of materials including porcelain, metals, ceramic, glass, plastics etc.

Packaging:

Colour: translucent

Packaging: 2K-dual cartridge 24mL

Shelf life:

At least 12 months in unopened packaging in a cool and dry storage place at temperatures between +5°C and +25°C.

Surfaces:

Type: a wide variety of porous and non-porous substrates, except PS, PP and PE

State of Surface: clean, dry, free of dust and grease

We recommend a preliminary compatibility test.

Applying the adhesive:

Method: cut of the nozzle of both components at the same height. Mix both components thoroughly and apply the mixed adhesive onto one substrate. Join the substrates together immediately and clamp or support materials for at least 10 minutes. Pressing the materials, during curing, is necessary to reach the highest possible end strength.

Application temperature: +5°C to +25°C

Repair: with Epofix

Clean: Epofix can, before the adhesive is cured, be removed from tools and materials with Soudal Cleaner 90A. Cured adhesive has to be removed mechanically.

Health- and safety recommendations:

Apply the usual industrial hygiene.

Wear protective gloves.

Consult the label for more information.

Remarks:

Epofix can be re-used within several months after the cartridge is resealed with the seal.

Opmerking: Deze fiche vervangt alle voorgaande. De richtlijnen in deze documentatie zijn het resultaat van onze proeven en ervaring en worden te goeder trouw gegeven. Daar wij geen controle hebben over de toepassingsmodaliteiten kunnen wij niet verantwoordelijk gesteld worden voor de bekomen resultaten en voor eventuele schade voortvloeiend uit een verkeerd of niet-aangepast gebruik. Daar het ontwerp, de hoedanigheid van de ondergrond en de verwerkingsomstandigheden buiten onze beoordeling vallen, kan geen aansprakelijkheid op grond van deze publicatie worden aanvaard. Het is dan ook aangeraden om altijd voorafgaand een test uit te voeren eigen aan de specifieke plaatselijke omstandigheden. Soudal behoudt zich het recht voor de producten aan te passen zonder voorafgaandelijke berichtgeving.

Soudal Epofix 82A**1. Identification of the substance/preparation and the company****1.1 Identification of the substance or preparation:**

- Soudal Epofix 82A

1.2 Use of the substance or the preparation:

Adhesive

1.3 Company/undertaking identification:

SODAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
Tel. : +32 14 42 42 31
Fax : +32 14 44 39 71

1.4 Telephone number for emergency:

+32 14 58 45 45
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43 A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight ≤700)	25068-38-6 500-033-5	> 25	Xi;N	36/38-43-51/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Irritating to eyes and skin
- May cause sensitization by skin contact
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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

Soudal Epofix 82A

5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- Polyvalent foam
 - BC powder
 - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- None
- 5.3 Special exposure hazards:**
- Not easily combustible
 - On burning: release of toxic and corrosive gases/vapours: hydrogen chloride, carbon monoxide and carbon dioxide
- 5.4 Instructions:**
- Cool closed containers with water if they are exposed to the fire
 - Dilute toxic gases with water spray
 - Take account of environmentally hazardous firefighting water
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: Compressed air/oxygen apparatus
 - Protective clothing for exposure to chemicals

6. Accidental release measures

- 6.1 Personal protection/precautions:**
See headings 8.2/8.3/13
- 6.2 Environmental precautions:**
- Use appropriate containment to avoid environmental contamination
- 6.3 Methods of cleaning up:**
- Take up liquid spill into absorbent material e.g.: sand/earth
 - Shovel absorbed substance in closing drums
 - Carefully collect the spill/leftovers
 - Clean contaminated surfaces with a soap solution
 - Wash clothing and equipment after handling

7. Handling and storage

- 7.1 Handling:**
- Observe very strict hygiene - avoid contact
 - Do not discharge the waste into the drain
 - Remove contaminated clothing immediately
 - Clean contaminated clothing
- 7.2 Storage:**
- Keep container tightly closed
 - Keep out of direct sunlight
 - Store in a dry area
 - Keep away from: heat sources, oxidizing agents, acids, bases

Storage temperature	:	Room temperature	
Quantity limit	:	N.D.	kg
Storage life	:	365	days
Materials for packaging	:		
- suitable	:	synthetic material	

- 7.3 Specific uses:**
- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	: not listed
TLV-STEL	: not listed
TLV-Ceiling	: not listed
OES-LTEL	: not listed
OES-STEL	: not listed
MEL-LTEL	: not listed
MEL-STEL	: not listed
MAK	: not listed
TRK	: not listed
MAC-TGG 8 h	: not listed
MAC-TGG 15 min.	: not listed
MAC-Ceiling	: not listed
VME-8 h	: not listed
VLE-15 min.	: not listed
GWBB-8 h	: not listed
GWK-15 min.	: not listed
Momentary value	: not listed
EC	: not listed
EC-STEL	: not listed

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- High gas/vapour concentration: gas mask with filter of type A
- Respiratory protection not required for normal conditions of use

8.3.2 hand protection:

- Gloves

8.3.3 eye protection:

- Face shield

8.3.4 skin protection:

- Protective clothing

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9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Liquid
Odour	: Mild
Colour	: No data available

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: > 260	°C
Flashpoint	: > 204	°C
Explosion limits	: N.D.	Vol%
Vapour pressure (at 77°C)	: 0.04	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: 1.2	
Water solubility	: Poorly soluble	
Soluble in	: No data available	
Relative vapour density	: > 1	
Viscosity (at 20°C)	: N.D.	Pa.s
Partition coefficient n-octanol/water	: N.D.	
Evaporation rate		
ratio to butyl acetate	: < 1	
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:

- Stable under normal conditions

10.2 Materials to avoid:

- Keep away from: heat sources, oxidizing agents, acids, bases

10.3 Hazardous decomposition products:

- May polymerize on exposure to temperature rise
- On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, carbon monoxide and carbon dioxide)

11. Toxicological information

11.1 Acute toxicity:

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

11.2 Chronic toxicity:

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)	: not listed
IARC classification	: not listed

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

11.4 Acute effects/symptoms:

After inhalation:

On heating:

- Coughing
- Slight irritation

AFTER INGESTION:

- Nausea
- Vomiting
- Diarrhoea

AFTER SKIN CONTACT:

- Tingling/irritation of the skin
- On heating:
- Burns

AFTER EYE CONTACT:

- Irritation of the eye tissue
- Lacrimation
- Redness of the eye tissue

On heating:

- Burns

11.5 Chronic effects:

- May cause sensitization by skin contact
- Not listed in carcinogenicity class (IARC,EC,TLV,MAK)
- Not listed in mutagenicity class (EC,MAK)
- Not classified as toxic to reproduction (EC)

ON CONTINUOUS EXPOSURE/CONTACT:

- Skin rash/inflammation
- Red skin
- Swelling of the skin
- Cracking of the skin

12. Ecological information

12.1 Ecotoxicity:

reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700):

- LC50 (96 h) : 1.5/7.7 mg/l (SALMO GAIARDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (24 h) : 1.1/3.6 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 220 mg/l (CHLOROPHYTA)

12.2 Mobility:

- Volatile organic compounds (VOC): 0%
- Poorly soluble in water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- Biodegradation BOD₅ : N.D. % ThOD
- Water : No data available
- Soil : T $\frac{1}{2}$ N.D. days

12.4 Bioaccumulative potential:

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

12.5 Other adverse effects:

- WGK : 2 (classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : No data available
- Effect on waste water purification : No data available

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 04 09* (waste adhesives and sealants containing organic solvents or other dangerous substances)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Recycle/reuse
- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Substance must not be discharged into the sewer

13.3 Packaging:

- Abfallcode (91/689/EEG, Entscheidung 2001/118/EC der der. L47 of 16/2/2001): 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

14. Transport information

90
3082

14.1 Classification of the substance in compliance with UN Recommendations

UN number : 3082
 CLASS : 9
 SUB RISKS : -
 PACKING : III
 PROPER SHIPPING NAME :
 UN 3082, Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700))

14.2 ADR (transport by road)

CLASS : 9
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 9
 DANGER LABEL PACKAGES : 9

14.3 RID (transport by rail)

CLASS : 9
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 9
 DANGER LABEL PACKAGES : 9

14.4 ADNR (transport by inland waterways)

CLASS : 9
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 9
 DANGER LABEL PACKAGES : 9

14.5 IMDG (maritime transport)

CLASS : 9
 SUB RISKS : -
 PACKING : III
 MFAG : -
 EMS : F-A, S-F
 MARINE POLLUTANT : -

14.6 ICAO (air transport)

CLASS : 9
 SUB RISKS : -
 PACKING : III
 PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 914/Y914
 PACKING INSTRUCTIONS CARGO AIRCRAFT : 914

14.7 Special precautions in connection with transport

: Transport in tanks: not applicable

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 3082'
 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 directives 67/548/EEC and 1999/45/EC



Irritant



Dangerous for the environment

Contains:

R36/38	:	reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight <=700)
R43	:	Irritating to eyes and skin
R51/53	:	May cause sensitization by skin contact
	:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S(02)	:	(Keep out of reach of children)
S24	:	Avoid contact with skin
S29	:	Do not empty into drains
S37	:	Wear suitable gloves
S(46)	:	(If swallowed, seek medical advice immediately and show this container or label)
S61	:	Avoid release to the environment. Refer to special instructions/safety data sheets.

Contains epoxy constituents. See information supplied by the manufacturer

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 (NFPA)

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 2004
OES : Occupational Exposure Standards - United Kingdom 2003
MEL : Maximum Exposure Limits - United Kingdom 2003
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2002
TRK : Technische Richtkonzentrationen - Germany 2002
MAC : Maximale aanvaarde concentratie - the Netherlands 2004
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court 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 : Inhalable 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	st:	stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)
fa:	Faser	va:	vapour	
fi:	fibre	om:	oil mist	
fu:	fume	on:	olienevel/Ölnebel	(oil mist)
p:	poussière	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands 2005

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

R36/38 : Irritating to eyes and skin
R43 : May cause sensitization by skin contact
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment