



1 Identification of the substance / preparation and of the company

1.1 Product identifier

Buehler EpoxiCure Resin
Article number 20-8130-xxx

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

Mounting material for metallographic specimens

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Buehler GmbH

In der Steele 2
 D-40599 Düsseldorf / GERMANY
 Phone 0800 707 6273
 Fax 0800 707 6274
 Homepage www.buehler-met.de/en/
 E-mail sales@buehler.co.uk

Address enquiries to

Technical information

sales@buehler.co.uk

Safety Data Sheet

sdb@chemiebuero.de

1.4 Emergency phone

Company

0800 707 6273 (Only valid if dialled within the UK) +49 (0) 211 974100

2 Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal word

WARNING

Carc. 2 - H351 Suspected of causing cancer.
 Skin Sens. 1 - H317 May cause an allergic skin reaction.
 Muta. 2 - H341 Suspected of causing genetic defects.
 Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.
 Eye Irrit. 2 - H319 Causes serious eye irritation.
 Skin Irrit. 2 - H315 Causes skin irritation.

Classification according to conversion table Annex VII 1272/2008/EC

2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

Hazard symbols



Harmful



Dangerous for the environment

R-phrases

R 40: Limited evidence of a carcinogenic effect.
 R 36/38: Irritating to eyes and skin.
 R 43: May cause sensitisation by skin contact.
 R 68: Possible risk of irreversible effects.
 R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The product is classified and required to be labelled in accordance with EC-Directives

**2.2 Label elements****Labelling according to Regulation 67/548/EEC or 1999/45/EC****Hazard symbols**

Harmful



Dangerous for the environment

Contains:Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight \leq 700)

Butyl 2,3-epoxypropyl ether

R-phrases

R 40: Limited evidence of a carcinogenic effect.

R 36/38: Irritating to eyes and skin.

R 43: May cause sensitisation by skin contact.

R 68: Possible risk of irreversible effects.

R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S 61: Avoid release to the environment. Refer to special instructions, safety data sheets.

Special labelling

Contains epoxy-containing compounds. Observe manufacturer's instructions.

2.3 Other hazards**Physico-chemical hazards**

No particular hazards known.

Other hazards

none

3 Composition / Information on ingredients**3.1 Product-type:**

The product in question is a mixture.

Range [%]	Substance
80 - <100	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight \leq 700) CAS: 25068-38-6, EINECS/ELINCS: 500-033-5, EU-INDEX: 603-074-00-8 GHS/CLP: Eye Irrit. 2 - H319 - Skin Irrit. 2 - H315 - Skin Sens. 1 - H317 - Aquatic Chronic 2 - H411 EEC: Xi-N, R 36/38-43-51/53
10 - < 20	Butyl 2,3-epoxypropyl ether CAS: 2426-08-6, EINECS/ELINCS: 219-376-4, EU-INDEX: 603-039-00-7 GHS/CLP: Flam. Liq. 3 - H226 - Carc. 2 - H351 - Muta. 2 - H341 - Acute Tox. 4 - H332 - STOT SE 3 - H302 - Skin Sens. 1 - H335 - Aquatic Chronic 3 - H317 - H412 EEC: Xn, R 10-68-52/53-43-40-37-20/22

Comment on component partsSubstances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For the wording of the listed risk phrases refer to section 16.**4 First aid measures****4.1 Description of first aid measures****General information**

Change soaked clothing.

Inhalation

Ensure supply of fresh air.

In the event of symptoms seek for medical treatment.

Skin contact

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

Eye contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion

Consult a doctor immediately.

Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Headache



4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Foam.
Dry powder.
Water spray jet.
Carbon dioxide.

Extinguishing media that must not
be used Full water jet.

5.2 Special hazards arising from the substance or mixture

Unknown risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance with
the local regulations.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See section 8+13

7 Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
No special measures necessary if used correctly.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Do not store together with oxidizing agents.
Keep container tightly closed.
Keep container in a well-ventilated place.

7.3 Specific end use(s)

See product use, section 1.2

8 Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational
exposure limits to be monitored (GB)

not applicable



8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses.
Hand protection	Nitrile rubber, >480 min (EN 374). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Light protective clothing of plastic material.
Other	Avoid contact with eyes and skin. Do not inhale vapours. It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. Do not eat, drink, smoke or take drugs at work. After worktime and before work breaks the affected skin areas must be thoroughly cleaned. Remove soiled or soaked clothing immediately. Use barrier skin cream.
Respiratory protection	not applicable
Thermal hazards	No informations available.
Delimitation and monitoring of the environmental exposition	not determined

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	yellow
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not determined
Flash point [°C]	74
Flammability [°C]	not determined
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	1,13
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature	not determined

9.2 Other information

none

10 Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

**10.2 Chemical stability**

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with amines.
Reactions with oxidizing agents.

10.4 Conditions to avoid

No informations available.

10.5 Incompatible materials

See section 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

11 Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Range [%]	Substance
80 - <100	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight \leq 700), CAS: 25068-38-6 LD50, oral, Rat: 13600 mg/kg.
10 - < 20	Butyl 2,3-epoxypropyl ether, CAS: 2426-08-6 LD50, oral, Rat: 1660 mg/kg. LD50, dermal, Rabbit: 2520 mg/kg. LC50, inhalative, Rat: 14,02 mg/l (4h).

Serious eye damage/irritation	not determined
Skin corrosion/irritation	not determined
Respiratory or skin sensitisation	not determined
Specific target organ toxicity — single exposure	not determined
Specific target organ toxicity — repeated exposure	not determined
Mutagenicity	not determined
Reproduction toxicity	not determined
Carcinogenicity	not determined
General remarks	

Toxicological data of complete product are not available.
The product was classified on the basis of the calculation procedure of the preparation directive.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

12 Ecological information**12.1 Toxicity****12.2 Persistence and degradability**

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined



12.3 Bioaccumulative potential

No informations available.

12.4 Mobility in soil

No informations available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Other adverse effects

The product was classified on the basis of the calculation procedure of the preparation directive.
The product contains organically bound halogen in accordance with the formulation.

13 Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Disposal in an incineration plant in accordance with the regulations of the local authorities.
Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

080409*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)

150110*
150101
150102
150104

14 Transport information

14.1 UN number

See section 14.2 in accordance with UN shipping name

**14.2 UN proper shipping name****Transport by land according to ADR/RID**

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin) 9 N III

- Classification Code

M6

- Label



- ADR LQ

5 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (E)

Inland navigation (ADN)

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin) 9 N III

- Classification Code

M6

- Label

**Marine transport in accordance with IMDG**UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin) 9 III
MARINE POLLUTANT

- EMS

F-A, S-F

- Label



- IMDG LQ

5 I

Air transport in accordance with IATA

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin-mixture) 9 III

- Label

**14.3 Transport hazard class(es)**

See section 14.2 in accordance with UN shipping name

14.4 Packing group

See section 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See section 14.2 in accordance with UN shipping name

**14.6 Special precautions for user**

Relevant information under section 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

15 Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EEC-REGULATIONS**

1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

TRANSPORT-REGULATIONS

DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2012).

NATIONAL REGULATIONS (GB):EH40/2005 Workplace exposure limits with amendments October 2007.
CHIP 3/ CHIP 4**15.2 Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.



16 Other informations

16.1 R-phrases (section 03)

R 10: Flammable.
 R 20/22: Harmful by inhalation and if swallowed.
 R 37: Irritating to respiratory system.
 R 40: Limited evidence of a carcinogenic effect.
 R 43: May cause sensitisation by skin contact.
 R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R 68: Possible risk of irreversible effects.
 R 36/38: Irritating to eyes and skin.
 R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.2 Hazard statements (section 03)

H226 Flammable liquid and vapour.
 H351 Suspected of causing cancer.
 H341 Suspected of causing genetic defects.
 H332 Harmful if inhaled.
 H302 Harmful if swallowed.
 H335 May cause respiratory irritation.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.
 H319 Causes serious eye irritation.
 H315 Causes skin irritation.
 H411 Toxic to aquatic life with long lasting effects.

16.3 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 TLV@/TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative



16.4 Other informations

Observe employment restrictions for people yes

VOC (1999/13/CE) ~14%

Modified position Section 4 been added: Headache

Section 5 been added: Carbon monoxide (CO)

Section 11 been added: The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.