SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

EpoThin 2 Resin
Article number 20-3440-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

ITW Test & Measurement GmbH
Boschstraße 10
73734 Esslingen a. Neckar / GERMANY
Phone 0800 707 6273
Fax 0800 707 6274
Homepage www.buehler-met.de
E-mail info.uk@buehler.com

Address enquiries to

Technical information info.uk@buehler.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms


Signal word WARNING

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

1,3-Bis(2,3-epoxypropoxy)-2,2-dimethylpropane

[[(2-Ethylhexyl)oxy]methyl]oxirane

Trimethylolpropan triacrylate

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice / attention.
P501 Dispose of contents / container to in accordance with local / regional / national / international regulation.

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
50 - 80	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 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
10 - 30	1,3-Bis(2,3-epoxypropoxy)-2,2-dimethylpropane
	CAS: 17557-23-2, EINECS/ELINCS: 241-536-7, EU-INDEX: 603-094-00-7
	GHS/CLP: Skin Irrit. 2: H315 - Skin Sens. 1: H317
1 - < 10	[[(2-Ethylhexyl)oxy]methyl]oxirane
	CAS: 2461-15-6, EINECS/ELINCS: 219-553-6
	GHS/CLP: Skin Sens. 1: H317 - Skin Irrit. 2: H315
1 - < 10	Trimethylolpropan triacrylate
	CAS: 15625-89-5, EINECS/ELINCS: 239-701-3, EU-INDEX: 607-111-00-9
	GHS/CLP: Eye Irrit. 2: H319 - Skin Irrit. 2: H315 - Skin Sens. 1: H317

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek 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 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Seek medical advice 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

Allergic reactions
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

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

Extinguishing media that must not be used Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Nitrogen oxides (NOx).
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Use personal protective equipment.
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.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

The normal safety precautions for handling chemicals must be observed.
Use only in well-ventilated areas.

Do not eat, drink, smoke or take drugs at work.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Take off contaminated clothing and wash before reuse.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.

Keep container tightly closed.
Keep in a cool place. Store in a dry place.
Keep container in a well-ventilated place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 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. (EN 166:2001)
Hand protection	0,7mm: Butyl rubber, >120 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	Do not inhale vapours. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	clear
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	100 °C / 212 °F
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	1,114 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	No information available.
Viscosity	not applicable
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.

9.2 Other information

none

SECTION 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 oxidizing agents.
Reactions with strong acids and alkalies.

10.4 Conditions to avoid

See SECTION 7.2.
Strong heating.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Substance
Trimethylolpropan triacrylate, CAS: 15625-89-5
LD50, dermal, Rabbit: >5000 mg/kg bw (IUCLID).
LD50, oral, Rat: >5000 mg/kg bw (IUCLID).
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
LD50, dermal, Rabbit: 20000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.
1,3-Bis(2,3-epoxypropoxy)-2,2-dimethylpropane, CAS: 17557-23-2
LD50, oral, Rat: 4500 mg/kg.
[[(2-Ethylhexyl)oxy]methyl]oxirane, CAS: 2461-15-6
LD50, oral, Rat: > 5000 mg/kg.

Serious eye damage/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Respiratory or skin sensitisation
Toxicological data of complete product are not available.
Sensitizing.
Calculation method

Specific target organ toxicity — single exposure
Toxicological data of complete product are not available.
Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure
Toxicological data of complete product are not available.
Based on the available information, the classification criteria are not fulfilled.

Mutagenicity
Toxicological data of complete product are not available.
Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity
Toxicological data of complete product are not available.
Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity
Toxicological data of complete product are not available.
Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks
May cause respiratory tract irritation.
Symptoms (If swallowed): nausea, vomiting.

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.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
LC50, Daphnia magna: 1,3 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments
No information available.

Behaviour in sewage plant
No information available.

Biological degradability
No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

The product contains organically bound halogen in accordance with the formulation.
The product was classified on the basis of the calculation procedure of the preparation directive.
Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
Do not discharge product unmonitored into the environment or into the drainage.

SECTION 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*
150102
150104

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	3082
Inland navigation (ADN)	3082
Marine transport in accordance with IMDG	3082
Air transport in accordance with IATA	3082

14.2 UN proper shipping name

Transport by land according to ADR/RID	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
- Classification Code	M6
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (E)
Inland navigation (ADN)	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
- Classification Code	M6
- Label	
Marine transport in accordance with IMDG	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
- EMS	F-A, S-F
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9
Inland navigation (ADN)	9
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

14.4 Packing group

Transport by land according to ADR/RID	III
Inland navigation (ADN)	III
Marine transport in accordance with IMDG	III
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EEC-REGULATIONS	1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/CE)	0 g/l

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H411 Toxic to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

16.2 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

16.3 Other information

Classification procedure

Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 9 been added: No information available.

SECTION 9 deleted: not determined

SECTION 10 been added: Strong heating.

SECTION 11 been added: Calculation method

SECTION 11 deleted: not determined

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Based on the available information, the classification criteria are not fulfilled.

SECTION 11 been added: May cause respiratory tract irritation.

SECTION 11 been added: Symptoms (If swallowed): nausea, vomiting.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 12 deleted: not determined

SECTION 12 been added: No information available.

SECTION 14 been added: Environmentally hazardous substance, liquid, n.o.s. ((4-(1-methylethyl)phenyl)-(4-methylphenyl)iodonium tetrakis(pentafluorophenyl)borate (1-))

SECTION 14 deleted: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

SECTION 14 been added: Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

SECTION 14 deleted: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

SECTION 14 been added: Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

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