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Safety Data Sheet according to P.U.(A) 310/2013

Printing date 13.04.2025 Version number 35 Revision: 13.04.2025

1 Identification of the hazardous chemical and of the supplier

· Product identifier

· Trade name MC-Estrifan RIS - Komponente A

Recommended use of the chemical and restrictions on

use · Application of the substance No further relevant information available.

/ the mixture Epoxy resin

· Details of the supplier of the safety data sheet

Manufacturer/Supplier: MC-Bauchemie Müller GmbH & Co. KG

Am Kruppwald 1-8 D-46238 Bottrop Tel.: +49(0)2041-101-0 Fax.: +49(0)2041-101-400 E-Mail: info@mc-bauchemie.de

MC-Bauchemie AG Hagackerstr. 10 CH-8953 Dietikon Tel.: +44-7400510 Fax: +44-7400533

· Informing department: msds@mc-bauchemie.de

2 Hazard identification

· 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 allergic skin reaction.

Repr. 1B H360 May damage fertility or the unborn child.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

· Label elements

• GHS label elements The product is classified and labelled according to the Globally

Harmonised System (GHS).

· Hazard pictograms







GHS07 GHS08 GHS09

· Signal word Danger

· Hazard-determining

components of labelling: 4,4'-Methylenediphenyldiglycidyl ether

Oxirane, mono((C12-14-alkyloxy)methyl)derivatives

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}

methyl)oxirane

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Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane

(1:2)

· Hazard statements H315 Causes skin irritation.

H319 Causes serious eye irritation. H317 May cause allergic skin reaction.

H360 May damage fertility or the unborn child. H411 Toxic to aquatic life with long lasting effects.

• Precautionary statements P261 Avoid breathing dust/fume/ gas/mist/vapours/

spray.

P280 Wear protective gloves / eye protection / face

protection.

P281 Use personal protective equipment as required.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P362 Take off contaminated clothing and wash before

reuse.

P363 Wash contaminated clothing before reuse.

· Other hazards

· Results of PBT and vPvB assessment · PBT: Not applicable. · vPvB: Not applicable.

3 Composition and information of the ingredients of the hazardous chemical

· Chemical characterisation: Mixtures

• **Description:** Resin mixture with colouring agents.

Mixture consisting of the following components.

· Dangerous components:		
CAS: 1675-54-3	4,4'-Methylenediphenyldiglycidyl ether Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	60-80%
CAS: 100-51-6	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-30%
CAS: 68609-97-2	Oxirane, mono((C12-14-alkyloxy)methyl)derivatives Repr. 1B, H360; Skin Irrit. 2, H315; Skin Sens. 1, H317	10-30%
CAS: 9003-36-5	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥2.5-<10%
CAS: 933999-84-9	Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2) Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥1-<2.5%

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• Additional information For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· Description of first aid measures

• General information Remove contaminated clothing immediately. Consult a doctor if

symptoms occur. Move affected person to fresh air.

· After inhalation Supply fresh air; seek medical advice if symptoms occur.

If unconscious, place in recovery position and seek medical advice.

· After skin contact In case of contact with skin, wash carefully with plenty of soap and

water. Consult a doctor in case of skin reactions.

• After eye contact Rinse opened eye for several minutes under running water.

Call a doctor immediately

· After swallowing Rinse mouth with water. Never give anything by mouth to an

unconscious person. DO NOT induce vomiting. If symptoms

persist, consult a doctor.

· Information for doctor · Most important symptoms

and effects, both acute and

delayed Advice for the doctor: Elementary aid, decontamination,

symptomatic treatment.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with

water jet or alcohol-resistant foam.

· For safety reasons unsuitable

extinguishing agents V

Water with a full water jet.

· Special hazards arising from

the substance or mixture Can k

Can be released in case of fire

Carbon monoxide (CO) Nitrogen oxides (NOx)

(Traces)

· Advice for firefighters

• Protective equipment: Wear self-contained breathing apparatus.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

emergency procedures Wear protective equipment. Keep unprotected persons away. **Environmental precautions:** Inform respective authorities in case product reaches water or

sewage system.

Prevent material from reaching sewage system, holes and cellars.
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· Methods and material for

containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders,

universal binders, sawdust).

• Reference to other sections See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

7 Handling and storage

· Handling

· Precautions for safe handling Open and handle containers with care.

Ventilation measures are required in rooms without sufficient air

exchange (e.g. closed rooms),

because the occupational exposure limit values (see chapter 8)

could be exceeded. This must be avoided.

Wear suitable personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Change contaminated or damaged gloves and contaminated clothing immediately and wash skin immediately. Mix slowly, partially covering the mixing container. Pour carefully and slowly when repotting. Observe the BGBau technical data sheet and practical guide for handling epoxy

resins.

· Information about protection

against explosions and fires: Ensure sufficient air exchange and/or extraction in the working

areas. Take precautionary measures to avoid electrostatic

discharges.

· Conditions for safe storage, including any incompatibilities

Storage

· Requirements to be met by

storerooms and containers: No special requirements.

· Information about storage in

one common storage facility: Store away from foodstuffs.

· Further information about

storage conditions: None.
Storage class 6.1C

8 Exposure controls and personal protection

· Additional information about

design of technical systems: No further data; see section 7.

· Control parameters

· Components with critical

values that require

monitoring at the workplace: The product does not contain any relevant quantities of materials

with critical values that have to be monitored at the workplace.

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Trade name MC-Estrifan RIS - Komponente A

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DNELs			
CAS: 100	CAS: 100-51-6 Benzyl alcohol		
Oral	DNEL	4 mg/kg bw/Tag (ArL)	
		20 mg/kg bw/Tag (Ark)	
Dermal	DNEL	8 mg/kg bw/day (ArL)	
		40 mg/kg bw/day (Ark)	
Inhalative	DNEL	22 mg/m³ (ArL)	
		110 mg/m³ (Ark)	
CAS: 686	09-97-2	Oxirane, mono((C12-14-alkyloxy)methyl)derivatives	
Dermal	1	0.75 mg/kg bw/day (ArL)	
Inhalative	DNEL	0.49 mg/m³ (ArL)	
PNECs			
CAS: 100	-51-6 B	enzyl alcohol	
PNEC 0.	0.527 mg/l (Marine water sediment)		
0.	0.1 mg/l (Mew)		
1 1	mg/l (Fr	esh water sediment)	
PNEC 0.4	PNEC 0.456 mg/kg dwt (Bod)		
5.27 mg/kg dwt (Fresh water sediment)			
CAS: 68609-97-2 Oxirane, mono((C12-14-alkyloxy)methyl)derivatives			
PNEC 0.0	C 0.00072 mg/l (Mew)		
0.0	0.0072 mg/l (Freshwater)		
PNEC 80).12 mg/	kg dwt (Bod)	
6.0	677 mg/	kg dwt (Sediment)	
66	66.77 mg/kg dwt (Fresh water sediment)		

66.77 mg/kg dwt (

The lists that were valid during the compilation were used as basis.

- · Exposure controls
- · Personal protective equipment
- General protective and

hygienic measures Keep away from food, drink and animal feed.

Remove soiled, soaked clothing immediately. Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

· Breathing equipment: If workplace limit values cannot be complied with by ventilation

measures or if rooms cannot be technically ventilated, respiratory protection must be worn: Use combination filter A1-P2 (brown/white) in rooms that cannot be ventilated. If oxygen deficiency is expected, use self-contained breathing apparatus. Observe wearing time limits according to §9 (3) GefStoffV in conjunction

with BGR 190.

• **Protection of hands:** Selection of the glove material on consideration of the penetration

times, rates of diffusion and the degradation

· Material of gloves You can find help with choosing gloves on the website https://

www.bgbau.de/fileadmin/Gisbau/Projekte.pdf

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For example, we recommend the Sol-vex 37-900 protective gloves from Ansell GmbH. The breakthrough time of the protective gloves can be found under point 8 "Penetration time of the glove material". The selection of a suitable glove depends not only on the material, but also on other quality features and varies from manufacturer to manufacturer. As the product

is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.

Nitrile rubber

Recommended material thickness:≥ 0.4 mm

· Penetration time of glove material

The breakthrough times of the Sol-vex 37-900 protective gloves

are around 8 hours.

The following applies to all other gloves:

The exact breakthrough time must be obtained from the protective

glove manufacturer and adhered to.

Nitrile rubber

Material thickness: ≥ 0.40 mm Penetration time: ≥ 480 min

Butyl rubber:

Material thickness: ≥ 0.5 mm Penetration time: ≥ 480 min Tight-fitting safety goggles.

Safety goggles.

Protective clothing

Suitable protective clothing should be worn when working with epoxy resins. In addition to normal work clothing (long trousers, long-sleeved shirt or T-shirt), disposable overalls, aprons, overshoes, sleeve protectors etc. may be necessary depending on the activity. Uncovered areas of skin should be avoided as far as possible, even in hot weather. If the work involves kneeling, the

lower leg area should be protected by protective trousers.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Eye protection:

· Body protection:

Form: Fluid
Colour: Yellow
Smell: Characteristic

· **pH-value:** Not determined.

· Change in condition

Melting point/freezing point Not determined Initial boiling point and boiling range >200 °C

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Flash point:	101 °C
Auto-ignition temperature	400 °C
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Critical values for explosion:	
Lower:	1.3 Vol %
Upper:	13 Vol %
Steam pressure at 20 °C:	0.1 hPa
Vapour pressure at 50 °C:	0.7 hPa
Density at 20 °C	1.14 g/cm³
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
Viscosity:	
dynamic at 20 °C:	1300 mPas
kinematic:	Not determined.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

· Chemical stability

Thermal decomposition /

conditions to be avoided: No decomposition if used according to specifications.

· Possibility of hazardous

reactions

No dangerous reactions known

• Conditions to avoid No further relevant information available. Incompatible materials: No further relevant information available.

Hazardous decomposition

products: No dangerous decomposition products known

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity

CAS: 1675-54-3 4,4'-Methylenediphenyldiglycidyl ether	
Oral LD50 11400 mg/kg (rat)	
Dermal LD50 23000 mg/kg (rabbit)	

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	>2000 mg/kg (rat)		
51-6 Benzyl alcohol			
LD50	1230 mg/kg (rat)		
NOAEL 2nd year study	200 mg/kg (mouse)		
	200 mg/kg (rat)		
LD50	2000 mg/kg (rabbit)		
LC50/4 h	>4178 mg/l (rat)		
CAS: 68609-97-2 Oxirane, mono((C12-14-alkyloxy)methyl)derivatives			
LD50	17100 mg/kg (rat)		
bis(oxirane) a	s of 2,2'-[methylenebis(2,1-phenyleneoxymethylene) nd 2,2'-[methylenebis(4,1-phenyleneoxymethylene) d 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl		
LD50	>2000 mg/kg (rat)		
LD50	>2000 mg/kg (rabbit)		
3	LD50 NOAEL 2nd year study LD50 LC50/4 h 19-97-2 Oxirane, mono(LD50 18-36-5 Reaction mass bis(oxirane) a bis(oxirane) an oxirane		

Primary irritant effect:

Skin corrosion or irritation

· Serious eye damage or eye

irritation

· Respiratory / skin

sensitization

· Additional toxicological

information:

No sensitizing effect known.

No irritant effect.

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for

Preparations as issued in the latest version:

Irritant for skin and mucous membranes.

Irritant

· CMR effects (carcinogenity, mutagenicity and toxicity for

reproduction) Repr. 1B

12 Ecological information

· Toxicity

· Aquatic toxicity:		
CAS: 1675	CAS: 1675-54-3 4,4'-Methylenediphenyldiglycidyl ether	
LC50/72h	LC50/72h >11 mg/l (algae)	
IC50	>42.6 mg/l (Bak)	
LC50/96h	2 mg/l (Oncorhynchus mykiss)	
	1.3 mg/l (fish)	
EC50/48h	2.1 mg/l (daphnia)	
	1.8 mg/l (Daphnia magna)	
ErC50/72h	11 mg/l (Selenastrum capricornutum)	

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CAS: 100-51-6 Benzyl alcohol		
IC50/72h	700 mg/l (algae)	
LC50/96h	460 mg/l (Pimephales promelas)	
	10 mg/l (Lepomis macrochirus)	
CAS: 68609	9-97-2 Oxirane, mono((C12-14-alkyloxy)methyl)derivatives	
EbC50/72h	843 mg/l (Pseudokirchneriella subcapitata)	
LC50/96h	>5000 mg/l (Oncorhynchus mykiss)	
	1800 mg/l (Lepomis macrochirus)	
EC50	>100 mg/l (BEL)	
NOEC	500 mg/l (Pseudokirchneriella subcapitata)	
CAS: 9003-	36-5 Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl) oxirane	
LC50/96h	>100 mg/l (Daphnia magna)	
EC50/96h	>100 mg/l (Leucidus idus)	

· Persistence and degradability No further relevant information available.

Behaviour in environmental systems:

Bioaccumulative potential
 Mobility in soil
 No further relevant information available.
 No further relevant information available.

Ecotoxical effects:

· Remark: Toxic for fish

· Additional ecological information:

General notes: Toxic for aquatic organisms

Also poisonous for fish and plankton in water bodies.

Do not allow product to reach ground water, water bodies or

sewage system.

Danger to drinking water if even small quantities leak into soil.

· Results of PBT and vPvB assessment · PBT: Not applicable. · vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal information

· Waste treatment methods

• Recommendation Must not be disposed of together with household garbage. Do not

allow product to reach sewage system.

· Uncleaned packagings:

• Recommendation: Empty contaminated packagings thoroughly. They can be recycled

after thorough and proper cleaning.

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UN-Number	
ADR, IMDG, IATA	UN3082
UN proper shipping name ADR, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCI LIQUID, N.O.S. (Epoxide resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCI LIQUID, N.O.S. (Epoxide resin), MARIN POLLUTANT
Transport hazard class(es)	
ADR	
Class	9 (M6) Miscellaneous dangerous substances an articles.
Label	9
IMDG, IATA	
Class Label	9 Miscellaneous dangerous substances and articles.9
Packing group ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
Special marking (ADA):	Symbol (fish and tree)
Special precautions for user	Warning: Miscellaneous dangerous substances ar articles.
Kemler Number:	90
EMS Number:	F-A,S-F
Stowage Category	A
Transport in bulk according to Anne. Marpol and the IBC Code	x II of Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (ÉQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	(-)



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·IMDG

Limited quantities (LQ)

5L Code: E1

· Excepted quantities (EQ)

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE RESIN), 9,

15 Regulatory information

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

ſ	· EHS reference list	
ľ	CAS: 1675-54-3	4,4'-Methylenediphenyldiglycidyl ether
Ī	CAS: 100-51-6	Benzyl alcohol
Ī	CAS: 68609-97-2	Oxirane, mono((C12-14-alkyloxy)methyl)derivatives

· Directive 2012/18/EU

· Named dangerous

substances - ANNEX I None of the ingredients is listed.

· Seveso category E2 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-

tier requirements 200 t

· Qualifying quantity (tonnes) for the application of upper-

tier requirements 500 t

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing data

specification sheet: Environment protection department.

Contact:

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International

Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous

Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity - oral – Category 4 Skin Irrit. 2: Skin corrosion or irritation – Category 2

Eye Irrit. 2: Serious eye damage or eye irritation - Category 2

Skin Sens. 1: Skin sensitization – Category 1 Repr. 1B: Reproductive toxicity – Category 1B

Aquatic Chronic 2: Hazardous to the aquatic environment - chronic hazard -

Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - chronic hazard -

Category 3

* Data compared to the previous version altered.

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