

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

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

1.1 Product identifier

Trade name : Biresin® CH120-3 Hardener (B)

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

At present there is no complete information available on identified uses. When the data becomes available, it will be integrated into the safety data sheet.

Product use : Composites system., Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Company : Sika Deutschland GmbH
Kornwestheimer Str. 103-107
70439 Stuttgart
Telephone : +4971180090
E-mail address : EHS@de.sika.com

1.4 Emergency telephone number

Emergency telephone number : 0173-6774799 Out of office hours only
EHS@de.sika.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Type of product : Mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Corrosive	R35: Causes severe burns.
Harmful	R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
	R21/22: Harmful in contact with skin and if swallowed.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Sensitising

R43: May cause sensitisation by skin contact.

Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 + H312
H314
H317
H373

H411

Harmful if swallowed or in contact with skin
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

- 220-666-8 3-aminomethyl-3,5,5-trimethylcyclohexylamine
- 217-168-8 4,4'-methylenebis(cyclohexylamine)
- 216-032-5 m-phenylenebis(methylamine)
- 205-411-0 2-piperazin-1-ylethylamine

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical Name CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
3-aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 220-666-8 01-2119514687-32-XXXX	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1C; H314 Skin Sens.1A; H317 Aquatic Chronic3; H412	>= 25 - < 50
4,4'-methylenebis(cyclohexylamine) 1761-71-3 217-168-8 01-2119541673-38-XXXX	Xn; R22 C; R35 N; R51/53 Xn; R48/22 R43	Acute Tox.4; H302 Skin Corr.1A; H314 Skin Sens.1B; H317 STOT RE2; H373 Aquatic Chronic2; H411	>= 25 - < 50
Polyoxypropylentriamine 39423-51-3 500-105-6 01-2119556886-20-XXXX	Xn; R21/22 Xi; R41 N; R51/53	Acute Tox.4; H302 Acute Tox.4; H312 Eye Dam.1; H318 Aquatic Chronic2; H411	>= 10 - < 20
m-phenylenebis(methylamine) 1477-55-0 216-032-5 01-2119480150-50-XXXX	Xn; R20/22 C; R34 R43 R52/53	Acute Tox.4; H302 Acute Tox.4; H332 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 10 - < 20
2-piperazin-1-ylethylamine 140-31-8 205-411-0 01-2119471486-30-XXXX	C; R34 Xn; R21/22 R43 R52/53	Acute Tox.3; H311 Acute Tox.4; H302 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 5 - < 10
4-tert-butylphenol 98-54-4 202-679-0 01-2119489419-21-XXXX	Xi; R41-R38 N; R51/53 Repr.Cat.3; R62	Skin Irrit.2; H315 Eye Dam.1; H318 Repr.2; H361f Aquatic Chronic1; H410	>= 2,5 - < 3

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-------------------------|---|
| General advice | : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance. |
| If inhaled | : Move to fresh air.
Consult a physician after significant exposure. |
| In case of skin contact | : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. |
| In case of eye contact | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing. |
| If swallowed | : Do not induce vomiting without medical advice.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person. |

4.2 Most important symptoms and effects, both acute and delayed

- | | |
|----------|---|
| Symptoms | : Gastrointestinal discomfort
Allergic reactions
Dermatitis
Skin disorders
See Section 11 for more detailed information on health effects and symptoms. |
| Risks | : Health injuries may be delayed.
corrosive effects
sensitising effects |

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|-----------|--------------------------|
| Treatment | : Treat symptomatically. |
|-----------|--------------------------|

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | |
|------------------------------|---|
| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|------------------------------|---|

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.
Deny access to unprotected persons.

6.2 Environmental precautions

- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

- For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Avoid exceeding of the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Store in accordance with local regulations.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters *	Basis *
4-tert-butylphenol	98-54-4	AGW	0,08 ppm 0,5 mg/m3	DE TRGS 900

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
4-tert-butylphenol	98-54-4	PTBP (p-tert-butylphenol): 2 mg/l (urine)	Immediately after exposition or after working hours	

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields
Eye wash bottle with pure water

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Wear eye/face protection.

- Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
- Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (0,4 mm),
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.
- Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.
- Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
organic vapor filter (Type A)
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in particular to the mixing / stirring area. In case this is not sufficient to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

Environmental exposure controls

- General advice : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : colourless
- Odour : amine-like
- Odour Threshold : No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Flash point	: > 101 °C
Ignition temperature	: not applicable
Lower explosion limit (Vol%)	: No data available
Upper explosion limit (Vol%)	: No data available
Flammability (solid, gas)	: No data available
Oxidizing properties	: No data available
Auto-ignition temperature	: No data available
pH	: Note: not applicable
Melting point/range / Freezing point	: No data available
Boiling point/boiling range	: No data available
Vapour pressure	: No data available
Density	: ca.0,94 g/cm ³ at 20 °C
Water solubility	: Note: insoluble
Partition coefficient: n-octanol/water	: No data available
Viscosity, dynamic	: ca.10 mPa.s at 20 °C
Viscosity, kinematic	: > 7 - < 20,5 mm ² /s at 40 °C
Relative vapour density	: No data available
Evaporation rate	: No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Hazardous reactions : Stable under recommended storage conditions.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine :

Acute oral toxicity	: LD50 Oral rat: 1.030 mg/kg
Acute dermal toxicity	: Acute toxicity estimate : 1.100 mg/kg Method: Converted acute toxicity point estimate

4,4'-methylenebis(cyclohexylamine) :

Acute oral toxicity	: LD50 Oral rat: 625 mg/kg
Acute dermal toxicity	: LD50 Dermal rabbit: 2.110 mg/kg

Polyoxypropylentriamine :

Acute oral toxicity	: LD50 Oral rat: > 550 mg/kg
Acute dermal toxicity	: LD50 Dermal rabbit: > 1.001 mg/kg

m-phenylenebis(methylamine) :

Acute oral toxicity	: LD50 Oral rat: 930 mg/kg
Acute inhalation toxicity	: LC50 rat: 1,34 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 Dermal rat: > 3.100 mg/kg

2-piperazin-1-ylethylamine :

Acute oral toxicity	: LD50 Oral rabbit: ca. 2.097 mg/kg
Acute dermal toxicity	: LD50 Dermal rabbit: ca. 866 mg/kg

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Skin corrosion/irritation

Product

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Product

No data available

Respiratory or skin sensitisation

Product

May cause an allergic skin reaction.

Components:

4,4'-methylenebis(cyclohexylamine) :

Test Method: **Buehler Test**

Classification: **The product is a skin sensitiser, sub-category 1B.**

Result: **The product is a skin sensitiser, sub-category 1B.**

Germ cell mutagenicity

Product

Mutagenicity : No data available

Carcinogenicity

Product

Carcinogenicity : No data available

Reproductive Toxicity/Fertility

Reproductive toxicity : No data available

No data available

Reproductive Toxicity/Development/Teratogenicity

Teratogenicity : No data available

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

4,4'-methylenebis(cyclohexylamine) :

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: EC50: 6,84 mg/l, 48 h, Daphnia magna (Water flea)
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2-piperazin-1-ylethylamine :

Toxicity to fish	: LC50: > 100 mg/l, 96 h, Fish
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12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with the EWC Waste Regulation the classification of waste is to be assigned to the jurisdiction of the origin of waste. Therefore, it is not possible to assign a particular waste identification number.
Completely emptied packagings may be given for recycling.
Empty packaging may still contain hazardous residues. Empty packaging should be removed by a licensed waste contractor.
Sika has agreed disposal contracts for all packaging which is brought into circulation in Germany.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

For further details see www.sika.de

SECTION 14: Transport information

ADR

- 14.1 UN number** : 2735
14.2 Description of the goods : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, 4,4'-methylenebis(cyclohexylamine))
14.3 Class : 8
14.4 Packing group : II
Classification Code : C7
Labels : 8
Tunnel restriction code : (E)
14.5 Environmentally hazardous : yes

IATA

- 14.1 UN number** : 2735
14.2 Description of the goods : Polyamines, liquid, corrosive, n.o.s.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, 4,4'-methylenebis(cyclohexylamine))
14.3 Class : 8
14.4 Packing group : II
Labels : 8
14.5 Environmentally hazardous : yes

IMDG

- 14.1 UN number** : 2735
14.2 Description of the goods : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, 4,4'-methylenebis(cyclohexylamine))
14.3 Class : 8
14.4 Packing group : II
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B
14.5 Marine pollutant : yes

14.6 Special precautions for user

No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

SECTION 15: Regulatory information

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

Labelling according to EC Directives (1999/45/EC)

Hazard pictograms :



Corrosive



Dangerous for the environment

R-phrase(s)	: R21/22	Harmful in contact with skin and if swallowed.
	R35	Causes severe burns.
	R43	May cause sensitisation by skin contact.
	R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazardous components which must be listed on the label:

- 220-666-8 3-aminomethyl-3,5,5-trimethylcyclohexylamine
- 217-168-8 4,4'-methylenebis(cyclohexylamine)
- 216-032-5 m-phenylenebis(methylamine)
- 205-411-0 2-piperazin-1-ylethylamine

Prohibition/Restriction

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : None of the components are listed (=> 0.1 %).

REACH - List of substances subject to authorisation (Annex XIV) : not applicable

REACH Information: All substances contained in our Products are
- preregistered or registered by our upstream suppliers, and/or
- preregistered or registered by us, and/or

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

- excluded from the regulation, and/or
- exempted from the registration.

Water contaminating class : WGK 2 water endangering
(Germany) : Gemäß VwVws vom 30.Juli 2005

VOC-CH (VOCV) : no VOC duties

VOC-EU (solvent) : not applicable

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Full text of R-Phrases

R20/22	Harmful by inhalation and if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R22	Harmful if swallowed.
R34	Causes burns.
R35	Causes severe burns.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52	Harmful to aquatic organisms.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.

Full text of H-Statements

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® CH120-3 Hardener (B)



Revision Date 02.12.2014

Version 3.0

Print Date 09.12.2014

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
Repr.	Reproductive toxicity
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure

The information contained in this Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.



Changes as compared to previous version !