



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

1.1 Product identifier

Trade name : Biresin® L84 Part B

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

Product use : Tooling 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 : Emergency CONTACT (24-Hour-Number):
GBK GmbH Global Regulatory Compliance
+49(0)6132-84463
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	H332: Harmful if inhaled.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements

: EUH071 Corrosive to the respiratory tract.

Precautionary statements

: **Prevention:**
P261 Avoid breathing 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.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

- 220-666-8 3-aminomethyl-3,5,5-trimethylcyclohexylamine
- 216-032-5 m-phenylenebis(methylamine)
- 247-063-2 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
- 217-164-6 N-(3-(trimethoxysilyl)propyl)ethylenediamine
- 74956-86-8 1,2-Ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]-
- Oligomere aus Aminoalkylmethoxysilane

2.3 Other hazards

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

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Chemical name CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
3-aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 220-666-8 01-2119514687-32-XXXX	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Skin Sens.1A; H317 Aquatic Chronic3; H412 Eye Dam.1; H318	>= 40 - < 60
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine 25513-64-8 247-063-2 01-2119560598-25-XXXX	Acute Tox.4; H302 Skin Corr.1A; H314 Eye Dam.1; H318 Skin Sens.1A; H317	>= 20 - < 25
m-phenylenebis(methylamine) 1477-55-0 216-032-5 01-2119480150-50-XXXX	Acute Tox.4; H302 Acute Tox.4; H332 Skin Corr.1B; H314 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 20 - < 25
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3 217-164-6 01-2119970215-39-XXXX Contains: 1,2-Ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]- >= 5 - <= 10 % N,N'-bis[3-(trimethoxysilyl)propyl]ethylenediamine >= 5 - <= 10 %	Acute Tox.4; H332 Eye Dam.1; H318 Skin Sens.1; H317	>= 3 - < 5
1,2-Ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]- 74956-86-8	Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317	< 1
Oligomere aus Aminoalkylmethoxysilane	Eye Dam.1; H318 Skin Sens.1; H317	< 1

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

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
Respiratory disorder
Allergic reactions
Headache
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
- Risks : Health injuries may be delayed.
corrosive effects
sensitising effects
- Harmful if swallowed or if inhaled.
May cause an allergic skin reaction.
Causes serious eye damage.
Corrosive to the respiratory tract.
Causes severe burns.

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.

5.2 Special hazards arising from the substance or mixture



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 : Standard procedure for chemical fires.

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 : Do not breathe vapours or spray mist. Avoid exceeding 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 process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. 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 resealed 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) : Consult most current local Product Data Sheet prior to any use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value	Control parameters	Basis *
methanol	67-56-1	TWA	200 ppm 266 mg/m ³	GB EH40
		STEL	250 ppm 333 mg/m ³	GB EH40

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

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166
Eye wash bottle with pure water
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.

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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.

Ensure adequate ventilation, especially in confined areas.

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 : light yellow
Odour : amine-like
Odour Threshold : No data available
Flash point : > 101 °C
Autoignition temperature : No data available
Decomposition temperature : No data available



Lower explosion limit (Vol-%)	:	No data available
Upper explosion limit (Vol-%)	:	No data available
Flammability	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
pH	:	ca. 12 at 20 °C Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapour pressure	:	19,9983 hPa
Density	:	ca.1,1 g/cm ³ at 20 °C
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 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



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

Hazardous decomposition products : methanol

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

Components:

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

Acute oral toxicity : LD50 Oral (Rat): 1.030 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:

Acute oral toxicity : LD50 Oral (Rat): 910 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

N-(3-(trimethoxysilyl)propyl)ethylenediamine:

Acute oral toxicity : LD50 Oral (Rat): ca. 2.400 mg/kg

Acute inhalation toxicity : LC50: 1,49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): > 2.000 mg/kg



Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

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

Assessment: The product is a skin sensitiser, sub-category 1A.

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

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Corrosive to the respiratory tract.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

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

Toxicity to algae : ErC50: > 10 - 100 mg/l, 72 h, Desmodesmus subspicatus (green algae)

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine :

Toxicity to algae : EC50: 29,5 mg/l, 72 h, Scenedesmus capricornutum (fresh water algae)

Toxicity to fish (Chronic toxicity) : LC50: 174 mg/l, 48 h, Leuciscus idus (Golden orfe)

m-phenylenebis(methylamine) :

Toxicity to fish : LC50: > 10 - 100 mg/l, 96 h, Oryzias latipes (Japanese medaka)



Toxicity to daphnia and other aquatic invertebrates : EC50: > 10 - 100 mg/l, 48 h, Daphnia magna (Water flea)

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

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The generation of waste should be avoided or minimized wherever possible.
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Contaminated packaging : 15 01 10* packaging containing residues of or contaminated by dangerous substances



SECTION 14: Transport information

ADR

- 14.1 UN number** : 1760
14.2 UN proper shipping name : CORROSIVE LIQUID, N.O.S.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis(methylamine))
14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Classification Code : C9
Labels : 8
Tunnel restriction code : (E)
14.5 Environmental hazards : no

IATA

- 14.1 UN number** : 1760
14.2 UN proper shipping name : Corrosive liquid, n.o.s.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis(methylamine))
14.3 Transport hazard class(es) : 8
14.4 Packing group : III
Labels : 8
14.5 Environmental hazards : no

IMDG

- 14.1 UN number** : 1760
14.2 UN proper shipping name : CORROSIVE LIQUID, N.O.S.
(3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis(methylamine))
14.3 Class : 8
14.4 Packing group : III
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B
14.5 Marine pollutant : no

14.6 Special precautions for user

No data available

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

Not applicable

SECTION 15: Regulatory information

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

Prohibition/Restriction

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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 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : 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
- excluded from the regulation, and/or
- exempted from the registration.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

VOC-CH (VOCV) : < 0,01 %
no VOC duties

VOC-EU (solvent) : 3,56 %

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environmental regulation/legislation specific for the substance or mixture: : Environmental Protection Act 1990 & Subsidiary Regulations
Health and Safety at Work Act 1974 & Subsidiary Regulations
Control of Substances Hazardous to Health Regulations (COSHH)
May be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Full text of H-Statements

H302 Harmful if swallowed.
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.
H412 Harmful to aquatic life with long lasting effects.

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Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
LD50	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	Substances of Very High Concern
vPvB	Very persistent and very bioaccumulative

Classification of the mixture:

Acute Tox. 4	H302
Acute Tox. 4	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Aquatic Chronic 3	H412

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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 !

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