



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

1.1 Product identifier

Trade name : Biresin® F4 Part B
Registration number : 01-2119560598-25-XXXX
Substance name : 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
Substance No. : 247-134-8

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

Product use : Product is not intended for consumer use, Tooling system

1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Deutschland GmbH
Kornwestheimer Str. 103-107
D-70439 Stuttgart
Telephone : +49 711 8009 0
E-mail address of person : EHS@de.sika.com
responsible for the SDS

1.4 Emergency telephone number

Emergency CONTACT (24-Hour-Number):
GBK GmbH Global Regulatory Compliance +49(0)6132-84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Type of product : Substance

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
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.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.
Precautionary statements	:	Prevention: P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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.

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

3.1 Substances

Chemical name	CAS-No. EC-No.	Concentration [%]
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	25513-64-8 247-063-2 01-2119560598-25-XXXX	100

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
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.
May cause an allergic skin reaction.
Causes serious eye damage.
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. 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.
- Storage class (TRGS 510) : 8A, Combustible, corrosive hazardous materials
- 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

Contains no substances with occupational exposure limit values.

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.
- 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 : No special measures required.

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
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 : Not applicable
Melting point/range / Freezing point : No data available
Boiling point/boiling range : No data available
Vapour pressure : ca.0,02 hPa
at 20 °C
Density : ca.0,87 g/cm³
at 20 °C
Water solubility : No data available
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

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Components:

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

Acute oral toxicity : LD50 Oral (Rat): 910 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.

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

Not classified based on available information.

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:

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)

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 : There is no data available for this product.



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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.
For further details see www.sika.de

SECTION 14: Transport information

ADR

14.1 UN number : 2327
14.2 Description of the goods : TRIMETHYLHEXAMETHYLENEDIAMINES
14.3 Class : 8
14.4 Packing group : III
Classification Code : C7
Labels : 8
Tunnel restriction code : (E)
14.5 Environmentally hazardous : no

IATA

14.1 UN number : 2327
14.2 Description of the goods : Trimethylhexamethylenediamines
14.3 Class : 8
14.4 Packing group : III
Labels : 8
14.5 Environmentally hazardous : no

IMDG

14.1 UN number : 2327
14.2 Description of the goods : TRIMETHYLHEXAMETHYLENEDIAMINES
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

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
- 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

Water contaminating class (Germany) : WGK 2 water endangering
: WGK 2 water endangering
VwVwS

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

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Biresin® F4 Part B



Revision Date 22.05.2017

Version 4.0

Print Date 22.05.2017

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 dose (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

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 !