

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



## Biresin® S19 (B)

Date of last issue: 28.10.2022  
Revision Date: 12.06.2023

Version 3.2

Print Date 12.06.2023

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

#### 1.1 Product identifier

Trade name : Biresin® S19 (B)

UK REACH Registration Number : 01-2119541673-38-XXXX

Substance name : 4,4'-methylenebis(cyclohexylamine)

EC-No. : 217-168-8

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

Product use : Tooling system

#### 1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Limited  
Watchmead Welwyn Garden City  
Hertfordshire. AL7 1BQ

Telephone : +44 (0)1707 394444

Telefax : +44 (0)1707 329129

E-mail address of person responsible for the SDS : EHS@uk.sika.com

#### 1.4 Emergency telephone number

National Chemical Emergency Centre (NCEC)  
24 Hour Emergency Telephone Number +44 870 190 6777

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin corrosion, Sub-category 1B	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.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure if swallowed.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

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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. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
Precautionary statements	:	<b>Prevention:</b> P260 Do not breathe mist or vapours. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  <b>Response:</b> 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. 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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

EC-No. : 217-168-8

#### Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
4,4'-methylenebis(cyclohexylamine)	1761-71-3 217-168-8	100	Acute toxicity estimate  Acute oral toxicity: 380 mg/kg

### 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

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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.  
May cause damage to organs through prolonged or repeated exposure if swallowed.  
Causes severe burns.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.

### 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.

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## 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

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respective authorities.

### 6.3 Methods and material 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.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : 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 resealed and kept upright to prevent leakage. Store in accordance with local regulations.

Further information on storage stability : 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.

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters *	Basis *
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Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Engineering measures

Maintain air concentrations below occupational exposure standards.  
Ensure adequate ventilation, especially in confined areas.

##### Personal protective equipment

- Eye/face 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 (> 0,1 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.

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- Physical state : liquid  
Colour : yellow  
Odour : amine-like
- Melting point/range / Freezing point : No data available

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Boiling point/boiling range : No data available

Flammability (solid, gas) : No data available

### Upper/lower flammability or explosive limits

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : > 101 °C  
Method: closed cup

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : Not applicable

### Viscosity

Viscosity, dynamic : ca. 80 mPa.s (20 °C)

Viscosity, kinematic : > 20,5 mm<sup>2</sup>/s (40 °C)

### Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-octanol/water : No data available

Vapour pressure : 0,01 hPa

Density : ca. 0,96 g/cm<sup>3</sup> (20 °C)

Relative vapour density : No data available

Particle characteristics : No data available

## 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

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### 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.

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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Harmful if swallowed.

#### Components:

#### **4,4'-methylenebis(cyclohexylamine):**

Acute oral toxicity : LD50 Oral (Rat): 380 mg/kg

Acute toxicity estimate: 380 mg/kg  
Method: Calculation method

Acute dermal toxicity : LD50 Dermal (Rabbit): 2.110 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:

#### **4,4'-methylenebis(cyclohexylamine):**

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Test Type : Buehler Test  
Assessment : The product is a skin sensitiser, sub-category 1B.  
Result : The product is a skin sensitiser, sub-category 1B.

### 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

May cause damage to organs through prolonged or repeated exposure if swallowed.

### Aspiration toxicity

Not classified based on available information.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## 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  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

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### 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 Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 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 : 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.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

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**ADR** : UN 2735  
**IMDG** : UN 2735  
**IATA** : UN 2735

### 14.2 UN proper shipping name

**ADR** : POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(4,4'-methylenebis(cyclohexylamine))  
**IMDG** : POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(4,4'-methylenebis(cyclohexylamine))  
**IATA** : Polyamines, liquid, corrosive, n.o.s.  
(4,4'-methylenebis(cyclohexylamine))

### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
<b>ADR</b>	: 8	
<b>IMDG</b>	: 8	
<b>IATA</b>	: 8	

### 14.4 Packing group

**ADR**  
Packing group : II  
Classification Code : C7  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

**IMDG**  
Packing group : II  
Labels : 8  
EmS Code : F-A, S-B

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 855  
Packing instruction (LQ) : Y840  
Packing group : II  
Labels : Corrosive

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 851  
Packing instruction (LQ) : Y840  
Packing group : II  
Labels : Corrosive

### 14.5 Environmental hazards

**ADR**

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Environmentally hazardous : no

### IMDG

Marine pollutant : no

### IATA (Passenger)

Environmentally hazardous : no

### IATA (Cargo)

Environmentally hazardous : no

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17) : Not applicable

International Chemical Weapons Convention (CWC)  
Schedules of Toxic Chemicals and Precursors : Not applicable

Regulation (EC) No 1005/2009 on substances that de-  
plete the ozone layer : Not applicable

GB Export and import of hazardous chemicals - Prior  
Informed Consent (PIC) Regulation : Not applicable

Control of Major Accident Hazards Regulations  
2015 (COMAH) : Not applicable

Volatile organic compounds : Law on the incentive tax for volatile organic compounds  
(VOCV)  
no VOC duties

Directive 2010/75/EU of 24 November 2010 on industrial  
emissions (integrated pollution prevention and control)  
Not applicable

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 environ- : Environmental Protection Act 1990 & Subsidiary Regulations

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mental regulation/legislation specific for the substance or mixture:

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 substance by the supplier.

## SECTION 16: Other information

### Full text of other abbreviations

ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road
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

### Further information

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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