

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

Jokisch Migma Evio DPR

Revision date: 24.01.2017

Product code: 152

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Jokisch Migma Evio DPR

Further trade names

Old product name: Jokisch Hyper BO

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Coolant Fluid

1.3. Details of the supplier of the safety data sheet

| | | |
|--------------------------|------------------------|-----------------------------|
| Company name: | Jokisch GmbH | |
| Street: | Industriestraße 5 | |
| Place: | DE-33813 Oerlinghausen | |
| Telephone: | +49(0)5202/9734-0 | Telefax: +49(0)5202/9734-49 |
| e-mail: | info@jokisch-fluids.de | |
| e-mail (Contact person): | MSDS@jokisch-fluids.de | |
| Internet: | www.jokisch-fluids.de | |

1.4. Emergency telephone number:

Giftnotruf Berlin: +49 (0) 30 / 30686 790

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard Statements:

Causes severe skin burns and eye damage.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

2,2-(cyclohexylimino)bisethanol

Signal word: Danger**Pictograms:****Hazard statements**

| | |
|------|--|
| H314 | Causes severe skin burns and eye damage. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statements

| | |
|----------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P310 | Immediately call a POISON CENTER/doctor. |
| P501 | Dispose of contents/container to hazardous waste. |

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2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

| CAS No | Chemical name | Quantity | | |
|------------|---|--------------|------------------|-----------|
| | EC No | Index No | REACH No | |
| | Classification according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 105-59-9 | 2,2'-(methylimino)diethanol, N-methyldiethanolamine | | | 2,5-10% |
| | 203-312-7 | 603-079-00-5 | | |
| | Eye Irrit. 2; H319 | | | |
| 141-43-5 | Ethanolamin - Neutralised | | | 2,5-10% |
| | 205-483-3 | | 01-2119486455-28 | |
| | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4; H332 H312 H302 | | | |
| 102-71-6 | Triethanolamin | | | 2,5-10% |
| | 203-049-8 | | 01-2119486482-31 | |
| | | | | |
| 4500-29-2 | 2,2-(cyclohexylimino)bisethanol | | | 2,5 -10 % |
| | 224-809-5 | | 01-2119962183-38 | |
| | Acute Tox. 4, Skin Corr. 1C, STOT RE 2, Aquatic Chronic 3; H302 H314 H373 H412 | | | |
| 31075-24-8 | 1,2-Ethanediamin, N',N',N',N',-tetramethyl-,polymer mit 1,1'-oxybis(2-chloroethan) | | | 0-1 % |
| | 608-578-1 | | | |
| | Acute Tox. 4, Acute Tox. 4, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H332 H302 H400 H410 | | | |

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

Medical treatment necessary. Do not get in eyes, on skin, or on clothing. Do not breathe gas/fumes/vapour/spray.

Wear personal protection equipment. Avoid contact with skin, eyes and clothes. Avoid contact with skin. Do not effect a mouth-to-mouth resuscitation.

After inhalation

Provide fresh air. Medical treatment necessary. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Remove contaminated clothing immediately and dispose off safely. Rinse skin with water/shower. Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not subject to friction. Call a physician



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immediately. In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk. Rinse mouth thoroughly with water. Call a POISON CENTER/doctor/.? if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Causes burns. Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

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

Treat symptomatically. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Co-ordinate fire-fighting measures to the fire surroundings. Foam.

Dry extinguishing powder. Carbon dioxide (CO₂). Water fog. Water.

Unsuitable extinguishing media

none

5.2. Special hazards arising from the substance or mixture

Non-flammable. Contaminated fire-fighting water must be collected separately.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of fire:

Wear self-contained breathing apparatus. Full protective suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Provide adequate ventilation. Wear personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Keep away from unprotected people. Keep upwind.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Wash with plenty of water.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 refer to chapter 8 12,13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe

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gas/fumes/vapour/spray. Provide adequate ventilation. When using do not eat, drink or smoke. Wear personal protection equipment.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Further information on handling

When using do not eat, drink or smoke.

High slip hazard because of leaking or spilled product.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Advice on storage compatibility

Keep away from food, drink and animal feedingstuffs.

Do not store with strong oxidizing agents.

Keep in a cool place away from acids. Keep in a cool, well-ventilated place away from alkali.

7.3. Specific end use(s)

Coolant Fluid

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|----------------|-----|-------------------|-----------|---------------|--------|
| 141-43-5 | 2-Aminoethanol | 1 | 2.5 | | TWA (8 h) | WEL |
| | | 3 | 7.6 | | STEL (15 min) | WEL |

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Wear suitable protective clothing.

Eye/face protection

Suitable eye protection: goggles. Tightly sealed safety glasses. Eye protection: DIN EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Tested protective gloves are to be worn: DIN EN 374 Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves.



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Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Skin protection

Wear suitable protective clothing. Wear personal protection equipment.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. IF exposed: Use appropriate respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: clear
Odour: characteristic

pH-Value: 9,8

Changes in the physical state

Melting point: ASTM D 1120

Initial boiling point and boiling range: >100 °C

Flash point: >100 °C

Flammability

Solid: not applicable

Gas: not applicable

Auto-ignition temperature

Solid: No information available.

Gas: No information available.

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Density (at 15,5 °C): 1,07 g/cm³

Water solubility: easily soluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

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10.4. Conditions to avoid

frost.

10.5. Incompatible materials

Oxidizing agents, strong.
Strong acid
strong alkalis

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

| CAS No | Chemical name | | | | |
|------------|--|---------------|----------|--------|--------|
| | Exposure route | Dose | Species | Source | Method |
| 105-59-9 | 2,2'-(methylimino)diethanol, N-methyldiethanolamine | | | | |
| | oral | LD50 mg/kg | 4680 | Rat | |
| 141-43-5 | Ethanolamin - Neutralised | | | | |
| | oral | ATE mg/kg | 500 | | |
| | dermal | ATE mg/kg | 1100 | | |
| | inhalative vapour | ATE | 11 mg/l | | |
| | inhalative aerosol | ATE | 1,5 mg/l | | |
| 102-71-6 | Triethanolamin | | | | |
| | oral | LD50 mg/kg | 5530 | RAT | |
| | dermal | LD50 mg/kg | > 2000 | RABBIT | |
| 4500-29-2 | 2,2-(cyclohexylimino)bisethanol | | | | |
| | oral | LD50 mg/kg | 2000 | Rat | |
| 31075-24-8 | 1,2-Ethanediamin, N',N',N',N',-tetramethyl-,polymer mit 1,1'-oxybis(2-chloroethan) | | | | |
| | oral | LD50 mg/kg | 1951 | Rat | |
| | dermal | LD50 mg/kg | > 2000 | Rabbit | |
| | inhalative vapour | ATE | 11 mg/l | | |
| | inhalative (4 h) aerosol | LC50 | 2,9 mg/l | Rat | |

Further information

Causes burns. Risk of serious damage to eyes.

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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| CAS No | Chemical name | | | | | |
|------------|--|-----------------------|-----------|-------------------------------------|--------|--------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 105-59-9 | 2,2'-(methylimino)diethanol, N-methyldiethanolamine | | | | | |
| | Acute fish toxicity | LC50 1000 - 2200 mg/l | 96 h | Leuciscus idus | | |
| | Acute algae toxicity | ErC50 37 mg/l | 72 h | Desmodesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 233 mg/l | 48 h | Daphnia magna | | |
| 141-43-5 | Ethanolamin - Neutralised | | | | | |
| | Acute fish toxicity | LC50 227 mg/l | 96 h | Pimephales promelas | | |
| | Acute algae toxicity | ErC50 15 mg/l | 72 h | Desmodesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 65 mg/l | 48 h | Daphnia magna | | |
| 102-71-6 | Triethanolamin | | | | | |
| | Acute fish toxicity | LC50 11800 mg/l | 96 h | Pimephales Promelas | | |
| | Acute crustacea toxicity | EC50 2038 mg/l | 48 h | Großer Wasserfloh | 24h | |
| 4500-29-2 | 2,2-(cyclohexylimino)bisethanol | | | | | |
| | Acute fish toxicity | LC50 >100 mg/l | 96 h | Brachydaniorerio | | |
| | Acute algae toxicity | ErC50 12,5 mg/l | 72 h | Desmodesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 163 mg/l | 48 h | Daphnia magna | | |
| 31075-24-8 | 1,2-Ethanediamin, N',N',N',N',-tetramethyl-,polymer mit 1,1'-oxybis(2-chloroethan) | | | | | |
| | Acute fish toxicity | LC50 0,047 mg/l | 96 h | Oncorhynchus mykiss (Rainbow trout) | | |
| | Acute crustacea toxicity | EC50 0,37 mg/l | 48 h | Daphnia magna | | |
| | Fish toxicity | NOEC 0,037 mg/l | 4 d | Oncorhynchus mykiss (Rainbow trout) | | |
| | Algae toxicity | NOEC 0,0019 mg/l | 5 d | Selenastrum capricornutum | | |
| | Crustacea toxicity | NOEC 0,08 mg/l | 2 d | Daphnia magna | | |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|----------|---|---------|
| 105-59-9 | 2,2'-(methylimino)diethanol, N-methyldiethanolamine | -1,08 |
| 102-71-6 | Triethanolamin | -2,53 |

12.4. Mobility in soil

Miscible with: Water.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Advice on disposal


Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. This material and its container must be disposed of as hazardous waste. The waste code numbers have since 1.1.1999 not only product but essentially application specific. The valid application for waste code can the European Waste Catalogue be removed.

Contaminated packaging


Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|--|--|
| 14.1. UN number: | UN 2735 |
| 14.2. UN proper shipping name: | AMINES, LIQUID, CORROSIVE, N.O.S. (Ethanolamin - Neutralised; 2,2-(cyclohexylimino)bisethanol) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| |  |
| Classification code: | C7 |
| Special Provisions: | 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|--|--|
| 14.1. UN number: | UN 2735 |
| 14.2. UN proper shipping name: | AMINES, LIQUID, CORROSIVE, N.O.S. (Ethanolamin - Neutralised; 2,2-(cyclohexylimino)bisethanol) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| |  |
| Classification code: | C7 |
| Special Provisions: | 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |

Marine transport (IMDG)

| | |
|--|--|
| 14.1. UN number: | UN 2735 |
| 14.2. UN proper shipping name: | AMINES, LIQUID, CORROSIVE, N.O.S. (Ethanolamin - Neutralised; 2,2-(cyclohexylimino)bisethanol) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |

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Hazard label:

8



Special Provisions:

223, 274

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-A, S-B

Air transport (ICAO-TI/IATA-DGR)**14.1. UN number:**

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (Ethanolamin - Neutralised; 2,2-(cyclohexylimino)bisethanol)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Special Provisions:

A3 A803

Limited quantity Passenger:

1 L

Passenger LQ:

Y841

Excepted quantity:

E1

IATA-packing instructions - Passenger:

852

IATA-max. quantity - Passenger:

5 L

IATA-packing instructions - Cargo:

856

IATA-max. quantity - Cargo:

60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: strongly corrosive.

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****EU regulatory information**

2004/42/EC (VOC): 20 % (214 g/l)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

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(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)