

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 27.12.2023

Version number 5 (replaces version 4)

Revision: 12.07.2023

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

· **1.1 Product identifier**

· **Trade name:** 4-morpholinopropanesulphonic acid  
MOPS free acid

· **Article number:** 1303

· **CAS Number:**  
1132-61-2

· **EC number:**  
214-478-5

· **Registration number**

A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

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

No further relevant information available.

· **Application of the substance / the mixture**

Chemical for research, development, manufacturing, laboratory chemical for analysis.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Biosolve Chimie  
20 Rue Roger Husson, 57260 Dieuze, France  
Tel: +33 3 878 675 80/81/82/83/84/85  
Email: info@biosolvechimie.com

Biosolve B.V.  
Leenderweg 78, 5555 CE Valkenswaard, the Netherlands.  
Tel: +31-(0)40-2071300  
Fax: +31-(0)40-2048537  
Email: info@biosolve-chemicals.com

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

Contact list of appointed bodies for information relating to emergency health response, according to Art. 45(1) Reg. (EC) No 1272/2008.

See below section 16 or at <https://poisoncentres.echa.europa.eu/home>.

Help desk: <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>).

Data from: ECHA - EUROPEAN CHEMICALS AGENCY

For more information see section 16.

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



Acute Tox. 4 H302 Harmful if swallowed.

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*Acute Tox. 4 H312 Harmful in contact with skin.*

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

*The substance is classified and labelled according to the CLP regulation.*

· **Hazard pictograms**



GHS07

· **Signal word** *Warning*

· **Hazard statements**

*H302+H312 Harmful if swallowed or in contact with skin.*

· **Precautionary statements**

*P280 Wear protective gloves / protective clothing.*

*P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*P330 Rinse mouth.*

*P362+P364 Take off contaminated clothing and wash it before reuse.*

*P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

**SECTION 3: Composition/information on ingredients**

· **3.1 Substances**

· **CAS No. Description**

*CAS: 1132-61-2 4-morpholinopropanesulphonic acid*

*MOPS free acid*

· **Identification number(s)**

· **EC number:** *214-478-5*

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information:**

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

· **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

· **After skin contact:** *Generally the product does not irritate the skin.*

· **After eye contact:** *Rinse opened eye for several minutes under running water.*

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- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition  
-  
No smoking. Keep away from combustible material.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **Hand protection**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection** Not required.

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Solid

· **Colour:**

White to off-white soild.

· **Odour:**

Characteristic

· **Odour threshold:**

No data available.

· **Melting point/freezing point:**

277-280 °C

· **Boiling point or initial boiling point and boiling range**

Undetermined.

· **Flammability**

Product is not flammable.

· **Lower and upper explosion limit**

· **Lower:**

No data available

· **Upper:**

No data available

· **Flash point:**

Not applicable.

· **Decomposition temperature:**

No data available

· **pH**

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- **Viscosity:**
- **Dynamic:** Not applicable.
- **Solubility**
- **water at 20 °C:** 1440 g/l
- **Partition coefficient n-octanol/water (log value)** No data available
- **Vapour pressure:** Not applicable.
- **Density and/or relative density**
- **Density:** Not determined.
- **Relative density** No data available
- **Vapour density** Not applicable.
- **Particle characteristics**
- See section 3.

- **9.2 Other information**
- **Appearance:**
- **Form:** Solid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** No data available
- **Explosive properties:** Product does not present an explosion hazard.
- **Molecular weight** 209.26 g/mol
- **Change in condition**
- **Evaporation rate** Not applicable.

- **Information with regard to physical hazard classes**
- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Void
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void
- **Pyrophoric liquids** Void
- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

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**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed or in contact with skin.

· **LD/LC50 values relevant for classification:**

Oral	LD50	500 mg/kg (ATE)
Dermal	LD50	1,100 mg/kg (ATE)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.

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- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP6	Acute Toxicity
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- |   |                 |
|---|-----------------|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                       | Void            |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | Void            |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | Void            |
| · <b>14.5 Environmental hazards:</b><br>· <b>Marine pollutant:</b>                          | No              |
| · <b>14.6 Special precautions for user</b>  | Not applicable. |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                       | Not applicable. |

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**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Product safety department
- **Contact:**  
Austria German Vergiftungsinformationszentrale 01 406 43 43 <http://www.goeg.at/de/VIZ>  
Belgium French Centre antipoison 070 245 245 <http://www.centreantipoisons.be>  
Dutch Antigif centrum 070 245 245 <http://www.antigifcentrum.be>  
German Gif tinformationszentrum 070 245 245 <http://www.poisoncentre.be>  
Bulgaria\* Bulgarian Токсикологични центрове 02 9154 411 <https://pirogov.eu/bg>  
Croatia\* Croatian Centar za kontrolu otrovanja +385 1 2348 342 <https://www.imi.hr/en/jedinica/poison-control-centre>  
Czech Rep Czech Toxikologické informační středisko +420 224 91 92 93; +420 224 91 54 02 <http://www.tis-cz.cz>  
Denmark Danish Giftlinien +45 8212 1212 <https://www.bispebjerghospital.dk/giflinien>  
Estonia Estonian Mürgistusteabekeskus 16662; +372 7943 794 <https://www.16662.ee>  
Finland Finnish Myrkytystietokeskus 0800 147 111; +358 9 471 977 <http://www.hus.fi/sairaanhoito/sairaanhoitopalvelut/myrkytystietokeskus/Sivut/default.aspx>  
France French Angers +33 2 41 48 21 21 <http://www.centres-antipoison.net/angers/index.html>  
Bordeaux +33 5 56 96 40 80 <http://www.centres-antipoison.net/bordeaux/index.html>  
Lille +33 0800 59 59 59 <http://www.centres-antipoison.net/lille/index.html>  
Lyon +33 4 72 11 69 11 <http://www.centres-antipoison.net/lyon/index.html>  
Marseille +33 4 91 75 25 25 <http://www.centres-antipoison.net/marseille/index.html>  
Nancy +33 3 83 22 50 50 <http://www.centres-antipoison.net/nancy/index.html>  
Paris +33 1 40 05 48 48 <http://www.centres-antipoison.net/paris/index.html>  
Strasbourg +33 3 88 37 37 37 <http://www.centres-antipoison.net/strasbourg/index.html>

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Toulouse +33 5 61 77 74 47 <http://www.centres-antipoison.net/toulouse/index.html>  
Germany German Berlin +49 30 19240 <https://giftnotruf.charite.de>  
Bonn +49 228 19240 <http://www.gizbonn.de/index.php?id=272>  
Erfurt +49 361 730730 <https://www.ggiz-erfurt.de/home.html>  
Freiburg +49 761 19240 <https://www.uniklinik-freiburg.de/giftberatung.html>  
Göttingen +49 551 19240 <https://www.giz-nord.de/cms/index.php>  
Homburg/Saar +49 6841 19240 [http://www.uniklinikumsaarland.de/de/einrichtungen/  
k l i n i k e n \\_ i n s t i t u t e / k i n d e r \\_ u n d \\_ j u g e n d m e d i z i n /  
informations\\_und\\_behandlungszentrum\\_fuer\\_vergiftungen\\_des\\_saarlandes](http://www.uniklinikumsaarland.de/de/einrichtungen/kliniken_institute/kinder_und_jugendmedizin/informations_und_behandlungszentrum_fuer_vergiftungen_des_saarlandes)  
Mainz +49 6131 19240 <http://www.giftinfo.uni-mainz.de/index.php?id=24807>  
München +49 89 19240 <http://www.toxinfo.med.tum.de>  
Greece Greek κέντρο δηλητηριάσεων +30 213 200 9000 <http://www.aglaiakyriakou.gr/>; <http://0317.syzefxis.gov.gr>  
Hungary Hungarian Egészségügyi Toxikológiai Tájékoztató Szolgálat +36 6 80 20 11 99; +36 06 1 476 6464 <http://www.okbi.hu/page.php?trid=1&dz=103>  
Italy Italian Bergamo +39 800 88 33 00 [http://www.asst-pg23.it/section/259/Tossicologia\\_ -  
\\_Centro\\_antiveneni](http://www.asst-pg23.it/section/259/Tossicologia_-_Centro_antiveneni)  
Firenze +39 55 794 78 19 <http://www.antiveneni.altervista.org>  
Milano +39 2 661 01 029 <http://www.centroantiveneni.org>  
Pavia +39 382 244 44 <http://www-3.unipv.it/reumatologia-tossicologia/cav>  
Napoli +39 81 747 28 70  
Foggia +39 881 732 326  
Roma +39 6 685 93 726 / +39 6 499 78 000 / +39 6 305 43 43 [http://www.corso-primo-soccorso-  
roma.it/centri/antiveleno-lazio.html](http://www.corso-primo-soccorso-roma.it/centri/antiveleno-lazio.html)  
Ireland English Poisons information Centre of Ireland +353 1 809 21 66 <http://www.poisons.ie/Public>  
Latvia\* Latvian Saindēšanās informācijas centri +371 670 00 610 <https://www.aslimnica.lv/lv>  
Russian Латвия +371 67000610 <https://www.aslimnica.lv/lv>  
Lithuania Lithuanian Apsinuodijimų informacijos biuras + 370 5 236 20 52 <http://www.apsinuodijau.lt>  
Luxembourg German Giftinformationszentrum +49 800 255 00 <http://www.poisoncentre.be>  
French Centre antipoison +352 800 255 00 <http://www.centreantipoisons.be>  
Netherlands Dutch 31 (0)88 755 8 <https://www.productnotificatie.nl>  
Norway Norwegian Giftinformasjonen +47 22 59 13 00 <https://helsenorge.no/Giftinformasjon>  
Poland Polish Kraków +48 12 411 99 99 <http://www.oit.cm.uj.edu.pl>  
Gdansk +48 58 682 04 04 <http://www.pctox.pl/news.php>  
Poznań +48 61 847 69 46 [http://www.raszeja.poznan.pl/oddzialy/oddzial\\_toksikologiczny](http://www.raszeja.poznan.pl/oddzialy/oddzial_toksikologiczny)  
Warszawa +48 607 218 174 [okzit@burdpi.pol.pl](mailto:okzit@burdpi.pol.pl)  
Portugal Portuguese Centro de Informação Antivenenos +351 808 250 143 <http://www.inem.pt>  
Romania Romanian CNMRMC +40 213 183 606 [infotox@insp.gov.ro](mailto:infotox@insp.gov.ro)  
Spitalul Clinic de Urgenta Bucuresti +40 215 992 300 int. 291  
[spital@urgentaflorasca.ro](mailto:spital@urgentaflorasca.ro)  
Spitalul Clinic Judetean de Urgenta Targu Mures +40 265.212.111  
secretariat@spitjudms.ro  
Russia Russian Горячая линия Министерства здравоохранения +7 495 628 4453; +7 495 627 2944  
<http://rospotrebnadzor.ru>  
Serbia Serbian Nacionalni centar za kontrolu trovanja +381 11 3608 440 [http://www.vma.mod.gov.rs/sr-lat/  
specijalnosti/centri/nacionalni-centar-za-kontrolu-trovanja](http://www.vma.mod.gov.rs/sr-lat/specijalnosti/centri/nacionalni-centar-za-kontrolu-trovanja)  
Slovak Rep Slovak Národné toxikologické informačné centrum +421 2 5477 4166 <http://www.ntic.sk>

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Spain Spanish Servicio de Información Toxicológica +34 91 562 04 20 [https://www.administraciondejusticia.gob.es/paj/pub/lico/ciudadano/informacion\\_institucional/organismos/instituto\\_nacional\\_de\\_toxicologia\\_y\\_ciencias\\_fo/renses/servicios/info\\_toxicologica/que\\_es\\_sit/ut/p/c5/04\\_SB8K8xLLM9MSSzPy8xBz9CP0os3g\\_A1cjCyd/DRwMDUwNLA08nwzAvM0czA\\_8gM6B8pFm8mae/rqWdQsImJcaiLiYGncViYa4CHR4GBiQExug1wAEd/CusNBrsWpwsLUACKPy3WuRvjlg83wy5sQ0G8C/tR-P\\_w\\_8\\_8\\_n\\_N\\_T\\_9\\_Q\\_t\\_y\\_Q\\_y\\_M\\_M\\_M\\_j\\_0\\_z\\_A\\_9\\_I\\_V\\_F\\_Q\\_H\\_Y\\_1\\_8\\_l\\_4/\\_d\\_l\\_3/\\_d\\_3/\\_L2dJQSEvUUt3QS9ZQnZ3LzZfTjBFMjhCMUEwMDUwOT/BJQjFWSjZBNjBPTjA!/?itemId=45381](https://www.administraciondejusticia.gob.es/paj/pub/lico/ciudadano/informacion_institucional/organismos/instituto_nacional_de_toxicologia_y_ciencias_fo/renses/servicios/info_toxicologica/que_es_sit/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3g_A1cjCyd/DRwMDUwNLA08nwzAvM0czA_8gM6B8pFm8mae/rqWdQsImJcaiLiYGncViYa4CHR4GBiQExug1wAEd/CusNBrsWpwsLUACKPy3WuRvjlg83wy5sQ0G8C/tR-P_w_8_8_n_N_T_9_Q_t_y_Q_y_M_M_M_j_0_z_A_9_I_V_F_Q_H_Y_1_8_l_4/_d_l_3/_d_3/_L2dJQSEvUUt3QS9ZQnZ3LzZfTjBFMjhCMUEwMDUwOT/BJQjFWSjZBNjBPTjA!/?itemId=45381)

Sweden Swedish Giftinformationscentralen +46 10 456 6700 <https://giftinformation.se>

Switzerland German Giftinformationszentrum 145 <http://toxinfo.ch>

French Centre antipoison 145 <http://toxinfo.ch>

Italian Centro Antiveneni 145 <http://toxinfo.ch>

United Kingdom English NHS Helpline 111 NHS Helpline - England and Wales: <http://www.nhs.uk/NHSEngland/AboutNHSServices/Emergencyandurgentcareservices/Pages/NHS-111.aspx>

· **Date of previous version:** 19.10.2022

· **Version number of previous version:** 4

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (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 Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

· **\* Data compared to the previous version altered.**