

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2022

Revision: 15.12.2022

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

- **Product identifier**
- **Trade name:** *dibutylamine*
- **Chemical Identification:** *di-n-butylamine*
- **Article number:** 383
- **CAS Number:**
111-92-2
- **EC number:**
203-921-8
- **Index number:**
612-049-00-0
- **Registration number** *01-2119475606-30*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Chemical.*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Möller Chemie GmbH & Co. KG
Bürgerkamp 1
D-48565 Steinfurt
Tel.: 02551/9340-0
Fax: 02551/9340-60
- **Further information obtainable from:** *Product safety department*
- **Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 1 H330 Fatal if inhaled.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS05



GHS06

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 1)

- **Signal word** *Danger*

- **Hazard statements**

- H226 *Flammable liquid and vapour.*
- H301+H311 *Toxic if swallowed or in contact with skin.*
- H330 *Fatal if inhaled.*
- H314 *Causes severe skin burns and eye damage.*

- **Precautionary statements**

- P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*
- P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*
- P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P320 *Specific treatment is urgent (see on this label).*
- P361+P364 *Take off immediately all contaminated clothing and wash it before reuse.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Other hazards**

The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.

- **Results of PBT and vPvB assessment**

- **PBT:**

The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).

- **vPvB:**

The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

3 Composition/information on ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

111-92-2 di-n-butylamine

- **Identification number(s)**

- **EC number:** 203-921-8

- **Index number:** 612-049-00-0

4 First aid measures

- **Description of first aid measures**

- **General information:** *Immediately remove any clothing soiled by the product.*

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Seek medical treatment.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water, foam, alcohol-resistant foam, fire extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide, carbon dioxide
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Mouth respiratory protective device.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Avoid contact with eyes and skin
Keep away from ignition sources.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep container tightly closed Keep us in a cool, well-ventilated place.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**
Storage period: 24 months
Keep container tightly sealed.
- **Storage class:**
3
flammable

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.· **Control parameters**· **Ingredients with limit values that require monitoring at the workplace:** Not required.· **DNELs**

worker:

Short term exposure - systemic effects, inhalation: 29 mg/m³Short term exposure - local effects, Inhalative: 29 mg/m³Long-term exposure - systemic effects, inhalation: 29 mg/m³Long-term exposure - local effects, inhalation: 29 mg/m³· **PNECs**

Fresh water: 0.084 mg/l

Sea water: 0.0084 mg/l

sporadic release: 0.084 mg/l

Sediment (fresh water): 68.7 mg/kg

Sediment (seawater): 6.87 mg/kg

Soil: 13.6 mg/kg

Sewage treatment plant: 149. mg/l

· **Additional information:** The lists valid during the making were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

Do not breathe vapors or spray mist.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

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**

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

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 protection:**

Tightly sealed goggles

(Contd. on page 5)

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

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 4)

· **Body protection:** Solvent resistant protective clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Amine-like
· Odour threshold:	Not determined.

· **pH-value (1 g/l) at 20 °C:** 11.1

· Change in condition

· Melting point/freezing point:	-62 °C
· Initial boiling point and boiling range:	160 °C (1013 hPa)

· **Flash point:** 40.5 °C (DIN 51755)· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** 255 °C· **Decomposition temperature:** 175 °C· **Auto-ignition temperature:** Not determined.· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	0.6 Vol %
· Upper:	6.8 Vol %

· **Vapour pressure at 20 °C:** 2.3 mbar

· Density at 20 °C:	0.7577 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water at 20 °C:** 3.8 g/l (OECD Guideline 105)· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

· Dynamic at 20 °C:	0.85 mPas
· Kinematic:	Not determined.

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· Chemical stability

The product is stable if the regulations / instructions for storage and handling are observed.

· **Possibility of hazardous reactions** Strong exothermic reaction with acids.· **Conditions to avoid** No further relevant information available.· **Incompatible materials:** Acids.· **Hazardous decomposition products:**

Nitrogen oxides

(Contd. on page 6)

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

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamineNitrogen oxides (NO_x)

(Contd. of page 5)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity**

Toxic if swallowed or in contact with skin.

Fatal if inhaled.

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

Dermal	LD50	1.010 mg/kg (rabbit)
Inhalative	LC50/ 4h	0.05 mg/l (ATE)

- **Primary irritant effect:**

- **Skin corrosion/irritation**

Causes severe skin burns and eye damage.

- **Serious eye damage/irritation**

Causes severe skin burns and eye damage.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **Additional toxicological information:**

The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

- **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.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

LC50/96 h: 5,5 mg/l (*Salmo gairdneri*)

EC50/48 h: 65,98 mg/l (*Daphnia magna*)

EC50/72 h: 16,9 mg/l (*Scenedesmus subspicatus*)

- **Persistence and degradability** Easily biodegradable

- **Behaviour in environmental systems:**

- **Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

- **Mobility in soil** No further relevant information available.

- **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.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **Results of PBT and vPvB assessment**

- **PBT:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

- **vPvB:** This substance is not considered to be very persistent nor very bioaccumulative (vPvB).

(Contd. on page 7)

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

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine







(Contd. of page 6)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Disposal according to local regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number
· ADR, IMDG, IATA | UN2248 |
| · UN proper shipping name
· ADR
· IMDG, IATA | 2248 DI-n-BUTYLAMINE
DI-n-BUTYLAMINE |
| · Transport hazard class(es)
· ADR |   |
| · Class
· Label | 8 (CF1) Corrosive substances.
8+3 |
| · IMDG |   |
| · Class
· Label | 8 Corrosive substances.
8/3 |
| · IATA |   |
| · Class
· Label | 8 Corrosive substances.
8 (3) |
| · Packing group
· ADR, IMDG, IATA | II |
| · Environmental hazards:
· Marine pollutant: | No |
| · Special precautions for user
· Hazard identification number (Kemler code):
· EMS Number:
· Stowage Category
· Segregation Code | Warning: Corrosive substances.
83
F-E,S-C
A
SG35 Stow "separated from" SGG1-acids |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 7)

· Transport/Additional information:**· ADR****· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG**· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 2248 DI-N-BUTYLAMINE, 8 (3), II

15 Regulatory information

- **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.
- **Seveso category**
H1 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
- **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.
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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:** Mrs. Steyer

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

(Contd. on page 9)

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

Printing date 20.12.2022

Revision: 15.12.2022

Trade name: dibutylamine

(Contd. of page 8)

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 1: Acute toxicity – Category 1
Skin Corr. 1B: Skin corrosion/irritation – Category 1B

EU