

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

Printing date 22.02.2023

Version number 1

Revision: 22.02.2023

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

- **1.1 Product identifier**
- **Trade name:** *tetraethylammonium bromide /TEAB*
- **Chemical Identification:** *Tetrylammonium bromide*
- **Article number:** 924
- **CAS Number:**
71-91-0
- **EC number:**
200-769-4
- **Registration number** 01-2120249917-42
- **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** *Intermediate.*
- **1.3 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*
- **1.4 Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **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** *Void*
- **Signal word** *Void*
- **Hazard statements**
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
*P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **2.3 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).

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
71-91-0 tetraethylammonium bromide /TEAB

(Contd. on page 2)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2023

Version number 1

Revision: 22.02.2023

Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 1)

- **Identification number(s)**
- **EC number:** 200-769-4

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Remove contaminated clothing immediately.
- **After inhalation:** Supply fresh air.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
If eye irritation persists, consult a specialist.
- **After swallowing:**
Rinse out mouth. Do not induce vomiting.
Seek medical treatment.
- **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:** CO₂, powder or water spray. Fight larger fires with water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
hydrogen bromide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Provide adequate ventilation.
- **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**
No dangerous substances are released.
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 contact with skin, eyes and clothing.
Provide suction extractors if dust is formed.
- **Information about fire - and explosion protection:** Keep away from heat and sources of ignition

(Contd. on page 3)

Safety data sheet
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Version number 1

Revision: 22.02.2023

Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 2)

- **7.2 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:**
Store away from oxidising agents.
Store away from acids.
- **Further information about storage conditions:**
Protect from moisture.
This product is hygroscopic.
- **Storage class:** 10-13
- **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.
- **DNELs**
tetraethylammonium bromide
worker:
dermal, chronic effects, systemic: 3.5 mg/kg bw/day
Inhalative, chronic effects, systemic: 12.3 mg/kg bw/day
- **PNECs**
Fresh water 65.6 µg/l
Intermittent release (freshwater) 656 µg/L
Sea water 6.56 µg/L
Intermittent release (seawater) 65.6 µg/L
Sewage Treatment Plant (STP) 28.4 mg/L
Sediment (freshwater) 348 µg/kg sediment dw
Sediment (seawater) 34.8 µg/kg sediment TG
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** In dust formation respiratory protection required.
- **Hand protection**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
Natural rubber, NR
nitrile rubber
Neopren Kautschuk
Polyvinyl chloride
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.

(Contd. on page 4)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2023

Version number 1

Revision: 22.02.2023

Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 3)

· Eye/face protection



Tightly sealed goggles

· Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Solid
· Colour:	White
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	280-290 °C
· Boiling point or initial boiling point and boiling range	Not applicable
· Flammability	Product is not flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	not applicable
· Decomposition temperature:	> 285 °C
· pH (100 g/l) at 20 °C	6.5
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Easily soluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	1.397 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	See item 3.

· 9.2 Other information

· Appearance:	
· Form:	Solid, powder
· Important information on protection of health and environment, and on safety.	
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· 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

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.02.2023

Version number 1

Revision: 22.02.2023

Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 4)

· 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

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** hygroscopic substance.
- **Thermal decomposition / conditions to be avoided:**
Avoid extreme heat. Avoid sources of ignition.
Avoid moisture.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Strong oxidizing agents
Bases.
- **10.6 Hazardous decomposition products:**
Nitrogen oxides (NO_x)
Hydrogen bromide
Nitrogen oxides

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **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:** EC50: 65.6 mg/L/48h (*Daphnia magna*)
- **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:** 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).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

(Contd. on page 6)

Safety data sheet
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Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 5)

- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

SECTION 13: Disposal considerations

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

SECTION 14: Transport information

- | | |
|---|-----------------|
| · 14.1 UN number or ID number
· ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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:** 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)

(Contd. on page 7)

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

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Revision: 22.02.2023

Trade name: tetraethylammonium bromide /TEAB

(Contd. of page 6)

*DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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