

## 1 Identification

- **Product identifier**
- **Trade name:** 1,1,2,2-Tetrabromoethane, Certified Grade
- **Article number:** 300187
- **CAS Number:**  
79-27-6
- **EC number:**  
201-191-5
- **Molecular Formula** C<sub>2</sub> H<sub>2</sub> Br<sub>4</sub>
- **Molecular Weight** 345.67
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06



GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
1,1,2,2-tetrabromoethane
- **Hazard statements**  
Harmful if swallowed.  
Fatal if inhaled.  
Causes skin irritation.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

Reviewed on 01/09/2018

**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 1)

*Causes serious eye irritation.*

· **Precautionary statements**

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Use only outdoors or in a well-ventilated area.*

*Wear protective gloves / eye protection / face protection.*

*[In case of inadequate ventilation] wear respiratory protection.*

*If swallowed: Call a poison center/doctor if you feel unwell.*

*If on skin: Wash with plenty of water.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*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.*

*Specific treatment is urgent (see on this label).*

*Rinse mouth.*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Take off contaminated clothing and wash it before reuse.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store locked up.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

79-27-6 1,1,2,2-tetrabromoethane

· **Identification number(s)**

· **EC number:** 201-191-5

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

*Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

Reviewed on 01/09/2018

**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 2)

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.

· **After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

· **Information for doctor**

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

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.

· **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, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically, dispose contaminated material as waste according to Section 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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

0.3 ppm

· **PAC-2:**

4.3 ppm

· **PAC-3:**

10 ppm

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

Reviewed on 01/09/2018

**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 3)

- *Open and handle receptacle with care.*
- *Prevent formation of aerosols.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** *15-30°C*
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Specific end use(s)** *No further relevant information available.*

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see Section 7.*
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**79-27-6 1,1,2,2-tetrabromoethane**

PEL Long-term value: *14 mg/m<sup>3</sup>, 1 ppm*

TLV Long-term value: *1.4\* mg/m<sup>3</sup>, 0.1\* ppm*  
*\*as inhalable fraction and vapor*

- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.*
  - Immediately remove all soiled and contaminated clothing.*
  - Wash hands before breaks and at the end of work.*
  - Store protective clothing separately.*
  - Avoid contact with the eyes and skin.*
- **Breathing equipment:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*
- **Protection of hands:**



Protective gloves

*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**
  - 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 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

Reviewed on 01/09/2018

Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Clear
· <b>Odor:</b>	Indeterminate
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.· **Change in condition**· **Boiling point/Boiling range:** Undetermined.· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto igniting:** Not determined.· **Danger of explosion:** See section 10· **Explosion limits:**

· <b>Lower:</b>	Not Applicable
· <b>Upper:</b>	Not Applicable

· **Vapor pressure:** Not Applicable

· <b>Density:</b>	Not Applicable
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with** Not Determined· **Water:** Not determined.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>VOC content:</b>	0.00 %

0.0 g/l / 0.00 lb/gl

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

## 10 Stability and reactivity

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

(Contd. on page 6)

# Safety Data Sheet

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Printing date 01/09/2018

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**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 5)

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

## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

### ATE (Acute Toxicity Estimate)

Oral	LD50	1,200 mg/kg (rat)
Inhalative	LC50/4 h	0.5 mg/L

### 79-27-6 1,1,2,2-tetrabromoethane

Oral	LD50	1,200 mg/kg (rat)
Dermal	LD50	5,250 mg/kg (rat)
Inhalative	LC50/4 h	0.5 mg/L (ATE)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 2 (Self-assessment): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

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**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**






(Contd. of page 6)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin-left: 20px;">UN2504</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p style="margin-left: 20px;">Tetrabromoethane<br/>2504 Tetrabromoethane<br/>TETRABROMOETHANE, MARINE POLLUTANT<br/>TETRABROMOETHANE</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p style="margin-left: 20px;">6.1 Toxic substances</p> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin-left: 20px;">6.1<br/>6.1</p>  |
| <ul style="list-style-type: none"> <li>· <b>ADR, IMDG</b></li> </ul>   | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p style="margin-left: 20px;">6.1 Toxic substances</p> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin-left: 20px;">6.1<br/>6.1</p>  |
| <ul style="list-style-type: none"> <li>· <b>IATA</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">  </div> <p style="margin-left: 20px;">6.1 Toxic substances</p>   |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="margin-left: 20px;">6.1<br/>6.1</p>  |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>  | <p style="margin-left: 20px;">III</p>  |

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

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Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade

(Contd. of page 7)

· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	Yes (DOT) Symbol (fish and tree)
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Toxic substances
· <b>Danger code (Kemler):</b>	60
· <b>EMS Number:</b>	6.1-02
· <b>Segregation groups</b>	Liquid halogenated hydrocarbons
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· <b>Remarks:</b>	Special marking with the symbol (fish and tree).
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 2504 TETRABROMOETHANE, 6.1, III

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

### · Section 355 (extremely hazardous substances):

Substance is not listed.

### · Section 313 (Specific toxic chemical listings):

Substance is not listed.

### · TSCA (Toxic Substances Control Act):

Substance is listed.

- TSCA new (21st Century Act) (Substances not listed)
- Proposition 65

### · Chemicals known to cause cancer:

Substance is not listed.

### · Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

### · Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/09/2018

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**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 8)

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS06 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

1,1,2,2-tetrabromoethane

· **Hazard statements**

Harmful if swallowed.

Fatal if inhaled.

Causes skin irritation.

Causes serious eye irritation.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves / eye protection / face protection.

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Specific treatment is urgent (see on this label).

Rinse mouth.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

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

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

US

(Contd. on page 10)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 01/09/2018

Reviewed on 01/09/2018

**Trade name: 1,1,2,2-Tetrabromoethane, Certified Grade**

(Contd. of page 9)

### 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:** Quality Control Dept.
- **Date of preparation / last revision** 01/09/2018 / -

- **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

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

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*Acute Tox. 4: Acute toxicity – Category 4*

*Acute Tox. 2: Acute toxicity – Category 2*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*