

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

Printing date 29.07.2016

Revision: 29.07.2016

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

- **1.1 Product identifier**
- **Trade name:** 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%
- **Item number:** 15-0076
- **CAS Number:**  
37170-64-2
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Strem Chemicals, Inc.  
7 Mulliken Way  
NEWBURYPORT, MA 01950  
USA  
info@strem.com
- **Further information obtainable from:** Technical Department
- **1.4 Emergency telephone number:**  
EMERGENCY: CHEMTREC: + 1 (800) 424-9300  
During normal opening times: +1 (978) 499-1600

**SECTION 2: Hazards identification**

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



GHS05 corrosion

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

- **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**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%
- **Hazard statements**  
H302+H332 Harmful if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name: 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%**

(Contd. of page 1)

· **Precautionary statements**

- P101 *If medical advice is needed, have product container or label at hand.*
- P102 *Keep out of reach of children.*
- P103 *Read label before use.*
- P231 *Handle under inert gas.*
- P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.*
- P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
- P422 *Store contents under inert gas.*
- 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 Chemical characterisation: Substances**

· **CAS No. Description**

37170-64-2 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information:**

*Immediately remove any clothing soiled by the product.*

*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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.*

*In case of unconsciousness place patient stably in side position for transportation.*

· **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:**

*Call for a doctor immediately.*

*Drink plenty of water and provide fresh air. 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:**

*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*

(Contd. on page 3)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name: 1,2-Bis(dichlorophosphino)-1,  
2-dimethylhydrazine, min. 98%**

(Contd. of page 2)

- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Handling:** Handle under inert gas.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:** Store contents under inert gas.
- **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:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

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

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

(Contd. on page 4)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name: 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%**

(Contd. of page 3)

Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

· **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.  
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.

· **Eye protection:**



Tightly sealed goggles

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Cloudy
<b>Odour:</b>	Acidic
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	no data °C
<b>Boiling point/Boiling range:</b>	no data °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Self-igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapour pressure:** no data hPa

(Contd. on page 5)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name: 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%**

(Contd. of page 4)

- |   |   |
|---|---|
| · <b>Density:</b>                                 | <i>Not determined.</i>                            |
| · <b>Relative density</b>                         | <i>Not determined.</i>                            |
| · <b>Vapour density</b>                           | <i>Not determined.</i>                            |
| · <b>Evaporation rate</b>                         | <i>Not determined.</i>                            |
| · <b>Solubility in / Miscibility with water:</b>  | <i>Not miscible or difficult to mix.</i>          |
| · <b>Partition coefficient (n-octanol/water):</b> | <i>Not determined.</i>                            |
| · <b>Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                   | <i>Not determined.</i>                            |
| <b>Kinematic:</b>                                 | <i>Not determined.</i>                            |
| · <b>Solvent content:</b>                         |   |
| <b>Organic solvents:</b>                          | <i>0.0 %</i>                                      |
| <b>VOC (EC)</b>                                   | <i>0.00 %</i>                                     |
| · <b>9.2 Other information</b>                    | <i>No further relevant information available.</i> |

**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 toxicological effects**
- **Acute toxicity**  
*Harmful if swallowed or if inhaled.*
- **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.*
- **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.*

GB

(Contd. on page 6)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name:** 1,2-Bis(dichlorophosphino)-1,  
2-dimethylhydrazine, min. 98%

(Contd. of page 5)


**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.
- **Additional ecological information:**
- **General notes:** Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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

**SECTION 14: Transport information**

- |  |   |
|--|---|
| · <b>14.1 UN-Number</b>                    |   |
| · <b>ADR, IMDG, IATA</b>                   | UN1760  |
| · <b>14.2 UN proper shipping name</b>      |   |
| · <b>ADR</b>                               | 1760 CORROSIVE LIQUID, N.O.S.   |
| · <b>IMDG</b>                              | CORROSIVE LIQUID, N.O.S.  |
| · <b>IATA</b>                              | Corrosive liquids, n.o.s.   |
| · <b>14.3 Transport hazard class(es)</b>   |   |
| · <b>ADR, IMDG, IATA</b>                   |   |
|  |  |
| · <b>Class</b>                             | 8 Corrosive substances.   |
| · <b>Label</b>                             | 8   |
| · <b>14.4 Packing group</b>                |   |
| · <b>ADR, IMDG, IATA</b>                   | II  |
| · <b>14.5 Environmental hazards:</b>       |   |
| · <b>Marine pollutant:</b>                 | No  |
| · <b>14.6 Special precautions for user</b> | Warning: Corrosive substances.  |
| · <b>EMS Number:</b>                       | F-A,S-B   |
| · <b>Stowage Category</b>                  | B   |

(Contd. on page 7)

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

Printing date 29.07.2016

Revision: 29.07.2016

**Trade name: 1,2-Bis(dichlorophosphino)-1,2-dimethylhydrazine, min. 98%**

(Contd. of page 6)

· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S., 8, II

**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.**
- **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 MSDS:** Technical Department.
- **Contact:** Technical Director
- **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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B