

# Material Safety Data Sheet

PROPIOLACTONE BETA (RXSOL-19-1427-035)



## 1. Product and Company Identification

Product Name PROPIOLACTONE BETA

Part Number RXSOL-19-1427-035

### Company Details:

RX MARINE INTERNATIONAL  
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## 2. Composition / information on ingredients

### Substances

Synonyms 3-Hydroxypropionic acid lactone  
Hydro acrylic acid  $\gamma$ -lactone

Formula C<sub>3</sub>H<sub>4</sub>O<sub>2</sub>

Molecular weight 72,06 g/mol

CAS-No. 57-57-8

EC-No. 200-340-1

Index-No. 606-031-00-1

| Component | Classification | Concentration |
|-----------|----------------|---------------|
|-----------|----------------|---------------|

### 3-Propanolide

|           |              |                              |         |
|-----------|--------------|------------------------------|---------|
| CAS-No.   | 57-57-8      | Acute Tox. 2; Skin Irrit. 2; | = 100 % |
| EC-No.    | 200-340-1    | Eye Irrit. 2; Carc. 1B;      |         |
| Index-No. | 606-031-00-1 | H330, H315, H319, H350       |         |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 3. Hazards Identification

### Classification of the substance or mixture

|                                |                                      |
|--------------------------------|--------------------------------------|
| Acute toxicity, (Category 2)   | H330: Fatal if inhaled.              |
| Skin irritation, (Category 2)  | H315: Causes skin irritation.        |
| Eye irritation, (Category 2)   | H319: Causes serious eye irritation. |
| Carcinogenicity, (Category 1B) | H350: May cause cancer.              |

### Label elements

|                   |                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| Signal Word       | Danger                                                                                                                  |
| Hazard Statements | H315 Causes skin irritation.<br>H319 Causes serious eye irritation.<br>H330 Fatal if inhaled.<br>H350 May cause cancer. |

|                                |                                                                                                                                                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautionary Statements       | P202 Do not handle until all safety precautions have been read and understood.                                                                                                                                                                              |
|                                | P260 Do not breathe mist or vapors.                                                                                                                                                                                                                         |
|                                | P264 Wash skin thoroughly after handling.                                                                                                                                                                                                                   |
|                                | P302 + P352 IF ON SKIN: Wash with plenty of water.                                                                                                                                                                                                          |
|                                | P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.                                                                                                                     |
| Supplemental Hazard Statements | P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.                                                                                                         |
|                                | None                                                                                                                                                                                                                                                        |
| Reduced Labeling (= 125 ml)    |                                                                                                                                                                                                                                                             |
| Signal Word                    | Danger                                                                                                                                                                                                                                                      |
| Hazard Statements              | H330 Fatal if inhaled.                                                                                                                                                                                                                                      |
|                                | H350 May cause cancer.                                                                                                                                                                                                                                      |
| Precautionary Statements       | P202 Do not handle until all safety precautions have been read and understood.                                                                                                                                                                              |
|                                | P260 Do not breathe mist or vapors.                                                                                                                                                                                                                         |
|                                | P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.                                                                                                                     |
|                                |                                                                                                                                                                                                                                                             |
|                                |                                                                                                                                                                                                                                                             |
| Supplemental Hazard Statements | None                                                                                                                                                                                                                                                        |
| Other hazards                  | This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.                                                          |
|                                | Ecological information:                                                                                                                                                                                                                                     |
|                                | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
|                                | Toxicological information:                                                                                                                                                                                                                                  |
|                                | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

## 4. First Aid Measures

|                                                                            |                                                                                                                                                     |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| General Advice                                                             | First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.                                          |
| If inhaled                                                                 | After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen. |
| In case of skin contact                                                    | In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.                        |
| In case of eye contact                                                     | After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.                                                  |
| If swallowed                                                               | After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.                                                   |
| Most important symptoms and effects, both acute and delayed                | The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11                                 |
| Indication of any immediate medical attention and special treatment needed | No data available                                                                                                                                   |

## 5. Fire-fighting Measures

|                                                       |                                                                                                                                                               |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                          | Water Foam Carbon dioxide (CO2) Dry powder                                                                                                                    |
| Unsuitable extinguishing media                        | For this substance/mixture no limitations of extinguishing agents are given.                                                                                  |
| Special hazards arising from the substance or mixture | Carbon oxides                                                                                                                                                 |
|                                                       | Combustible.                                                                                                                                                  |
|                                                       | Vapors are heavier than air and may spread along floors.                                                                                                      |
|                                                       | Forms explosive mixtures with air on intense heating.                                                                                                         |
| Advice for firefighters                               | Development of hazardous combustion gases or vapours possible in the event of fire.                                                                           |
|                                                       | Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. |
| Further information                                   | Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.          |

## 6. Accidental Release Measures

|                                                                     |                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.<br>For personal protection see section 8. |
| Environmental precautions                                           | Do not let product enter drains.                                                                                                                                                                                                          |
| Methods and material for containment and cleaning up                | Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.                                    |
| Reference to other sections                                         | For disposal see section 13.                                                                                                                                                                                                              |

## 7. Handling and Storage

|                                                              |                                                                                                                                                                |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advice on safe handling                                      | Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.                                                                        |
| Advice on protection against fire and explosion              | Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.                                        |
| Hygiene measures                                             | Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. |
| Conditions for safe storage, including any incompatibilities |                                                                                                                                                                |
| Storage conditions                                           | Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.                              |
| Storage stability                                            | Recommended storage temperature<br>-20 °C<br>Hydrolyzes readily.                                                                                               |
| Storage class                                                | Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials                                                         |
| Specific end use(s)                                          | Apart from the uses mentioned in section 1.2 no other specific uses are stipulated                                                                             |

## 8. Exposure controls and personal protection

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection               | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses                                                                                                                                                                                                                                                                                                                                    |
| Skin protection                   | Required                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Body Protection                   | Protective clothing<br><br>Required when dusts are generated.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Respiratory protection            | Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.<br>Recommended Filter type: Filter type P3<br>The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.<br>These measures have to be properly documented. |
| Control of environmental exposure | Do not let product enter drains.                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## 9. Physical and chemical properties

|                                              |                                    |
|----------------------------------------------|------------------------------------|
| Physical state                               | Liquid                             |
| Color                                        | No data available                  |
| Odor                                         | No data available                  |
| Melting point/freezing point                 | Melting point/range: -33 °C - lit. |
| Initial boiling point and boiling range      | 162 °C - lit.                      |
| Flammability (solid, gas)                    | No data available                  |
| Upper/lower flammability or explosive limits | Lower explosion limit: 2,9 %(V)    |
| Flash point                                  | 70 °C - closed cup                 |
| Autoignition temperature                     | No data available                  |

|                                        |                                                                                  |
|----------------------------------------|----------------------------------------------------------------------------------|
| Decomposition temperature              | No data available                                                                |
| pH                                     | No data available                                                                |
| Viscosity                              | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| Water solubility                       | Soluble                                                                          |
| Partition coefficient: n-octanol/water | log Pow: 0,46                                                                    |
| Vapor pressure                         | 4,5 hPa at 25 °C                                                                 |
| Density                                | 1,146 g/cm <sup>3</sup> at 25 °C - lit.                                          |
| Relative density                       | No data available                                                                |
| Relative vapor density                 | No data available                                                                |
| Particle characteristics               | No data available                                                                |
| Explosive properties                   | No data available                                                                |
| Oxidizing properties                   | No data available                                                                |
| Other safety information               |                                                                                  |
| Surface tension                        | 22 mN/m at 20 °C                                                                 |
| Relative vapor density                 | 2,49 - (Air = 1.0)                                                               |

## 10. Stability and reactivity

|                                    |                                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | Forms explosive mixtures with air on intense heating.<br>A range from approx. 15 Kelvin below the flash point is to be rated as critical. |
| Chemical stability                 | The product is chemically stable under standard ambient conditions (room temperature) .                                                   |
| Possibility of hazardous reactions | No data available                                                                                                                         |
| Conditions to avoid                | Strong heating.                                                                                                                           |
| Incompatible materials             | Strong oxidizing agents Strong oxidizing agents, Strong bases, Halogens, Thiocyanates, Thiosulfates                                       |
| Hazardous decomposition products   | In the event of fire: see section 5                                                                                                       |

## 11. Toxicological information

|                                                    |                                                                                                                           |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity                                     | Oral: No data available<br>LC50 Inhalation - 4 h - 0,6 mg/l<br>Inhalation: No data available<br>Dermal: No data available |
| Skin corrosion/irritation                          | Remarks: No data available                                                                                                |
| Serious eye damage/eye irritation                  | Remarks: No data available                                                                                                |
| Respiratory or skin sensitization                  | No data available                                                                                                         |
| Germ cell mutagenicity                             | No data available                                                                                                         |
| Carcinogenicity                                    | No data available                                                                                                         |
| Reproductive toxicity                              | No data available                                                                                                         |
| Specific target organ toxicity - single exposure   | Inhalation - May cause respiratory irritation.                                                                            |
| Specific target organ toxicity - repeated exposure | No data available                                                                                                         |
| Aspiration hazard                                  | No data available                                                                                                         |
| Additional Information                             |                                                                                                                           |
| Endocrine disrupting properties Product            |                                                                                                                           |

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: RQ7350000

#### Assessment

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. Ecological information

|                                         |                                                                                                                                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity                                | No data available                                                                                                                                                                                                                                           |
| Persistence and degradability           | No data available                                                                                                                                                                                                                                           |
| Bioaccumulative potential               | No data available                                                                                                                                                                                                                                           |
| Mobility in soil                        | No data available                                                                                                                                                                                                                                           |
| Results of PBT and vPvB assessment      | This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.                                                          |
| Endocrine disrupting properties Product |                                                                                                                                                                                                                                                             |
| Assessment                              | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| Other adverse effects                   | No data available                                                                                                                                                                                                                                           |

## 13. Disposal considerations

|                         |                   |
|-------------------------|-------------------|
| Waste treatment Methods | No data available |
|-------------------------|-------------------|

## 14. Transport information

|                              |                                                                                                                                                                                                                                                                                                                                       |                            |            |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| UN number                    | ADR/RID:3382                                                                                                                                                                                                                                                                                                                          | IMDG: 3382                 | IATA: 3382 |
| UN proper shipping name      | ADR/RID: TOXIC BY INHALATION LIQUID, N.O.S. (3-Propanolide) (3-Propanolide)<br>IMDG: TOXIC BY INHALATION LIQUID, N.O.S. (3-Propanolide) (3-Propanolide)<br>IATA: Toxic by inhalation liquid, n.o.s. (3-Propanolide) (3-Propanolide)<br>Passenger Aircraft: Not permitted for transport<br>Cargo Aircraft: Not permitted for transport |                            |            |
| Transport hazard class(es)   | ADR/RID:6.1                                                                                                                                                                                                                                                                                                                           | IMDG: 6.1                  | IATA: 6.1  |
| Packaging group              | ADR/RID: I                                                                                                                                                                                                                                                                                                                            | IMDG: I                    | IATA: I    |
| Environmental hazards        | ADR/RID: yes                                                                                                                                                                                                                                                                                                                          | IMDG Marine pollutant: yes | IATA: no   |
| Special precautions for user |                                                                                                                                                                                                                                                                                                                                       |                            |            |
| Tunnel restriction code      | (C/D)                                                                                                                                                                                                                                                                                                                                 |                            |            |
| Further information          | No data available                                                                                                                                                                                                                                                                                                                     |                            |            |

## 15. Regulatory information

|                                                                                                                                                                                         |                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Safety, health and environmental regulations/legislation specific for the substance or mixture                                                                                          | This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. |
| Authorisations and/or restrictions on use<br>REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | 3-Propanolide                                                                                    |
| National legislation<br>Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.         | H2 ACUTE TOXIC<br><br>H2 ACUTE TOXIC                                                             |

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. Other information

Other  
Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.