Material Safety Data Sheet

CALCIUM BROMIDE HYDRATE LR (RXSOL-60-6604-222)

1. Product and Company Identifaction

Product Name	**RXSOL-60-6518-001**
Product Type	ADA BUFFER
Revised date	27-04-2019

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / informationon ingredients

Substance / Preparation : ADA BUFFER
CAS No : 64-19-7
Substance.
Contains no other components or impurities which will influence the classification of the product.

3. Hazards Identification

3.1. Classification of the substance or mixture
Classification EC 67/548 or EC 1999/45
Classification : R10 C; R35
Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)
Health hazards : Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332 Skin corrosion - Category 1A - Danger (CLP : Skin Corr. 1A) H314
Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318
Physical hazards : Flammable liquids - Category 3 - Warning (CLP : Flam. Liq. 3) H226
3.2. Label elements
Labelling EC 67/548 or EC 1999/45
Symbol(s) : C : Corrosive
R Phrase(s) : R10 : Flammable.
R35 : Causes severe burns.
S Phrase(s) : S1/2 : Keep locked up and out of reach of children.
S23 : Do not breathe the gas, fumes, vapours, spray.
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).
Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms



Signal words : Danger
Hazard statements : H226 : Flammable liquid and vapour.
H314 : Causes severe skin burns and eye damage.
H332 : Harmful if inhaled.
Precautionary statements
• General : P102: Keep out of reach of children.
P103: Read label before use.

P101: If medical advice is needed, have product container or label at hand.
• Prevention : P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating, lighting,equipment.
P210: Keep away from heat, sparks, open flames or hot surfaces. – No smoking.
P280: Wear protective gloves, protective clothing, eye protection, face protection.
P271: Use only outdoors or in a well-ventilated area.
P260: Do not breathe dust, fume, gas, mist, vapours, spray.
P233: Keep container tightly closed.
P264: Wash thoroughly after handling.
• Response : P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.
P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P370+P378: In case of fire: Use for extinction.
• Storage : P403+P235: Store in well-ventilated place. Keep cool.
P405: Store locked up.
• Disposal considerations : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

4. First Aid Measures

4.1. Description of first aid measures

Inhalation : Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Skin contact : Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor.
Eye contact : Immediately call a POISON CENTER or doctor. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
Ingestion : Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Danger of serious damage to health by prolonged exposure through inhalation.
Causes severe skin burns and eye damage.
Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting Measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.
Surrounding fires : Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.
Thermal decomposition generates : Corrosive vapours.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection.
Ventilate area.
Technical measures : Use special care to avoid static electric charges.
Special precautions : Remove ignition sources. No naked lights. No smoking.
For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify

authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and Storage

7.1. Precautions for safe handling

Handling : Handle empty containers with care because residual vapours are flammable. Wash thoroughly after handling. Avoid contact during pregnancy or while nursing. Do not breathe dust, fume, gas, mist, vapours, spray. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. Use explosion-proof electrical, ventilating, lighting, …,equipment.

Special precautions : No naked lights. No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Keep container tightly closed. Ground/bond container and receiving equipment.

Storage regulation : Comply with applicable regulations.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

8. Exposure controls and personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

• Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

• Hand protection : Wear protective gloves.

• Skin protection : Wear suitable protective clothing.

• Eye protection : Chemical goggles or face shield.

• Others : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Liquid.

Odour : Strong, vinegar-like

Odour threshold : No data available.

pH value : No data available.

Melting point [°C] : 16.2 °C

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : 485 °C

Flammability (solid, gas) : N/A

Flammable liquid and vapour.

Flash point [°C] : 40°C

Boiling point [°C] : 117 - 118 °C

Initial boiling point [°C] : 117°C

Final boiling point [°C] : 118°C

Evaporation rate : 0,97

Vapour pressure [20°C] : 15.2 hPa at 20°C

Vapour pressure mm/Hg : N/A

Vapour density : 2,1

Density [g/cm3] : 1,049

Relative density, gas (air=1) : N/A

Relative density, liquid (water=1) : N/A

Solubility in water [% weight] : Complete

Solubility in water : N/A

Log Pow octanol / water at 20°C : No data available.

Solubility : 2,4

Viscosity at 40°C [mm2/s] : N/A

9.2. Other information

Explosive properties : N/A

Explosion limits - upper [%] : 19,90%

Explosion limits - lower [%] : 4%

Oxidising properties : No data available.

10. Stability and reactivity

10.1. Reactivity
Reactivity : Not established.
10.2. Chemical stability
Chemical stability : Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions
Hazardous reactions : Not established.
10.4. Conditions to avoid
Conditions to avoid : Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.
10.5. Incompatible materials
Materials to avoid : Strong acids. Strong bases.
10.6. Hazardous decomposition products
Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.
Thermal decomposition generates : Corrosive vapours. May release flammable gases.

11. Toxicological information

11.1. Information on toxicological effects
Acute toxicity
• Inhalation : Harmful if inhaled.
• Dermal : Based on available data, the classification criteria are not met.
• Ingestion : Based on available data, the classification criteria are not met.
Corrosion : Causes severe skin burns and eye damage.
Causes serious eye damage.
Irritation : Based on available data, the classification criteria are not met.
Sensitization : Based on available data, the classification criteria are not met.
Mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : Based on available data, the classification criteria are not met.
Toxic for reproduction : 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

12.1. Toxicity
Toxicity information : Not established.
12.2. Persistence - degradability
Persistence - degradability : Biodegradable.
12.3. Bioaccumulative potential
Bioaccumulative potential : Not established.
12.4. Mobility in soil
Mobility in soil : Not established.
12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.
12.6. Other adverse effects
Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods
General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Special precautions : Handle empty containers with care because residual vapours are flammable.

14. Transport information

14.1. Land transport (ADR-RID)
Proper shipping name : ACETIC ACID

UN N° : 2789
H.I. nr : 83
ADR - Class : 8
Labelling - Transport : 8 : Corrosive substance. 3 : Flammable liquid.
ADR - Classification code : CF1
CF1
ADR - Group : II
ADR - Packing instructions : P001
ADR - Limited Quantity : 1 L
ADR - Tunnel code : D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and
E. Other carriage: Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only]

Proper shipping name : ACETIC ACID,
UN N° : 2789
IMO-IMDG - Class or division : 8 : Corrosive substance. (3 : Flammable liquid.)
IMO-IMDG - Packing group : II
IMO- IMDG - Packing instructions : P001
IMO-IMDG - Limited quantities : 1 L
IMO-IMDG - Marine pollution : No
EMS-Nr : F-E S-C

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : ACETIC ACID
UN N° : 2789
IATA - Class or division : 8 : Corrosive substance. (3 : Flammable liquid.)
IATA - Packing group : II
IATA - Passenger and Cargo Aircraft : ALLOWED
- Passenger and Cargo - Packing : 851
instruction
- Passenger and Cargo - Maximum : 1 L
Quantity/Packing
IATA - Cargo only : ALLOWED
- Cargo only - Packing instruction : 855
- Cargo only - Maximum Quantity/ : 30 L
Packing
IATA - Limited Quantites : 0.5 L
ERG-Nr : 8F

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental : Ensure all national/local regulations are observed.
regulations/legislation specific for the substance or mixture
REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

16. Other information

Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
vPvB: very persistent and very bioaccumulative
Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006