1. Product and Company Identifaction

www.rxmarine.com

Product Name Encapsulted Ammonium Persulfate

Part Number RXSOL-81-6217-025

Company Details:

RX MARINE INTERNATIONAL 105, A wing , BSEL , TECH PARK. VASHI ,NEW BOMBAY 400703 INDIA

Branch: Kandla, Mumbai, Chennai, Vizag, Kolkata, UAE, OMAN, CANADA and KENYA

Phone +91 22 20871200 - 1400

Fax +91 22 27612100 :::AOH :0091 9821214367

 Email
 mail@rxmarine.com

 Website
 www.rxmraine.com

2. Composition / Information on ingredients

www.rxmarine.com

Chemical Name Cas No EC No Whight Formula Ammonium persulfate 7727-54-0 231-786-5 228,20 g/mol (NH₄) $_2$ S $_2$ O $_8$

3. Hazards Identification

www.rxmarine.com

Signal Word Danger

Hazard Statements H300 + H310 Fatal if swallowed or in contact with skin.

Precautionary statements P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective

gloves/ protective clothing. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a

POISON CENTER/ doctor.

Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No

1272/2008.

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.

4. First Aid Measures

www.rxmarine.com

General advice First aiders need to protect themselves. Show this material safety data

sheet to the doctor in attendance.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial

respiration. Consult a physician.

Eye Contact After eye contact: rinse out with plenty of water. Call in ophthalmologist.

Remove contact lenses.

Swallowed After swallowing: immediately make victim drink water (two glasses at

most). Consult a physician.

Skin Contact In case of skin contact: Take off immediately all contaminated clothing.

Rinse skin with water/ shower. Consult a physician.

Inhalation fresh air. Call in physician.

Ingestion Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms and effects, both acute and delaye The most important known symptoms and effects are described in the

Indication of any immediate medical attention and special treatment needed

labelling (see section 2.2) and/or in section 11

No data available

5. Fire-fighting Measures

www.rxmarine.com

Flammability May be combustible at high temperature.

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances

and the surrounding environment.

Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are

given.

Special hazards arising from the substance or mixture Nitrogen oxides (NOx) Sulfur oxides Container explosion may occur

> under fire conditions. Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

Further information May intensify fire; oxidizer.Suppress (knock down) gases/vapors/mists

with a water spray jet. Prevent fire extinguishing water from

contaminating surface water or the ground water system.

Fire may cause the evolution of Sulphur oxides, nitrogen oxides.

Hazardous combustion

products

Advice for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent

skin contact by keeping a safe distance or by wearing suitable protective

clothing.

Protective Equipment Use personal protective equipment.

Specific Hazards Arising from the Chemical Has a fire-promoting effect due to the release of oxygen.

Ambient fire may liberate hazardous vapours.

6. Accidental Release Measures

www.rxmarine.com

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. For personal protection

see section 8.

Spillage Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp

using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition

sources. Call for assistance on disposal.

Personal Protection Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice

for emergency responders: Protective equipment see section 8.

Environmental Precaution Do not let product enter drains.

Cover drains. Collect, bind, and pump off spills. Observe possible Methods and materials for containment and cleaning material restrictions (see sections 7 and 10). Take up carefully. Dispose of

properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections For disposal see section 13.

7. Handling and Storage

www.rxmarine.com

Advice on protection against fire and explosion

Incompatible materials

Hygiene measures

Keep away from open flames, hot surfaces and sources of ignition.

Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.

Immediately change contaminated clothing. Apply preventive skin

protection. Wash hands and face after working with substance. For

precautions see section 2.2.

Advice on safe handling Work under hood. Do not inhale substance/mixture.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture

sensitive.

Storage conditions Tightly closed. Keep locked up or in an area accessible only to qualified

or authorized persons. Do not store near combustible materials. Moisture

sensitive.

Storage class Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

Apart from the uses mentioned in section 1.2 no other specific uses are

stipulated

Advice on general occupational hygiene Advice on safe handling Observe label precautions. Change contaminated

clothing. Wash hands after working with substance.

8. Exposure controls and personal protection

www.rxmarine.com

Exposure controls

Specific end use(s)

Engineering Control

Eye/face protection

Body Protection

Skin protection

Respiratory protection

Other Protection Measure

Control of environmental exposure

No specific additional engineering controls are required. Provide good natural or artificial ventilation.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Where risk assessment shows air-purifying respirators are appropriate use a full@face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Handle in accordance with good industrial hygiene and safety practice.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and chemical properties

www.rxmarine.com

Physical state powder
Colour white

Odour

Odor Threshold Not Applicable

pH 1,0 - 2 at 228 g/l at 25 °C

Melting Point $-93 \, ^{\circ}\text{C - lit}.$ Boiling Point $97 \, ^{\circ}\text{C - lit}.$

Flash Point 6 °C - closed cup Evaporation Rate Not Applicable

Flammability (solid, gas)

No data available

Explosive limits No Data Available
Upper/lower flammability or explosive limits No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Vapour pressure No data available
Viscosity No data available

Density 1,980 g/cm3

Relative Density

Relative Density

No data available

Specific Gravity

No data available

Partition coefficient

No data available

Explosive properties No data available Solubility 228 g/l at 20 °C

Ignition temperature No information available.

Particle characteristics No data available

10. Stability and reactivity

www.rxmarine.com

Reactivity No data available

Chemical stability The product is chemically stable under standard ambient conditions (room

temperature) . May decompose on exposure to moist air or water.

Possibility of hazardous reactions No data available

Conditions to avoid Heat, flames and sparks.

Incompatible materials Strong acids, Strong bases, Strong oxidizing agents, Strong reducing

agents

Hazardous decomposition products In the event of fire: see section 5

11. Toxicological information

www.rxmarine.com

Acute toxicity LD50 Oral - Rat - 689 mg/kg Inhalation: No data available LD50 Dermal

- Rat - > 2.000 mg/kg

Skin corrosion/irritation Skin - Rabbit Result: No skin irritation

Serious eye damage/irritation Eyes - Rabbit Result: No eye irritation Eyes - Rabbit Result: Mild eye

irritation (OECD Test Guideline 405)

Respiratory or skin sensitization - Guinea pig Result: Causes sensitization. (OECD Test Guideline 406)

Carcinogenicity No data available
Germ cell mutagenicity No data available

Reproductive toxicity No data available
Specific target organ toxicity - single exposure No data available

Additional Information RTECS: UF9625000 Lung irritation, Cyanosis, Central nervous system

depression To the best of our knowledge, the chemical, physical, and

toxicological properties have not been thoroughly investigated.

12. Ecological information

www.rxmarine.com

Persistence and degradability

No data available

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 76 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 120 mg/l - 48 h

Toxicity Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1.520

mg/l - 96 h

Toxicity to bacteria EC10 - Bacteria - 14 mg/l - 72 h Remarks: (Lit.) EC5 - E.coli - 15.000

mg/l Remarks: (Lit.) (maximum permissible toxic concentration)

Toxicity to algae Static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 74,35

mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products) The value is given in analogy to the following substances:

maleic acid

Products Biodegradation The methods for determining the biological degradability are not

applicable to inorganic substances.

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 No data available
Other adverse effects No data available

13. Disposal considerations

www.rxmarine.com

Product Offer surplus and non-recyclable solutions to a licensed disposal

company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other

waste. Handle uncleaned containers like the product itself.

Contaminated packaging Dispose of as unused product.

Waste treatment Method See www.retrologistik.com for processes regarding the return of

chemicals and containers, or contact us there if you have further

questions.

14. Transport information

www.rxmarine.com

UN number ADR/RID:1444 IMDG:1444 IATA: 1444

UN proper shipping name ADR/RID:AMMONIUM PERSULPHATE IMDG:AMMONIUM

PERSULPHATE IATA: AMMONIUM PERSULPHATE

Transport hazard class(es)

ADR/RID: 5.1 IMDG: 5.1 IATA:5.1

Packaging group

ADR/RID: III IMDG: III IATA:III

Environmental hazards

ADR/RID: No IMDG: No IATA: No

Special precautions for user No data available

Further information Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

www.rxmarine.com

Safety, health and environmental regulations/legislation specific for the

substance or mixture

Other regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

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. For this product a chemical safety assessment was not carried out

Chemical Safety Assessment

16. Other information

www.rxmarine.com

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 weassume 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 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.

DISCLAIMER OF LIABILITY: The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.