

|              |                    |
|--------------|--------------------|
| Product Name | RXSOL-60-6605-813  |
| Product Type | VANADIUM PENTOXIDE |
| Revised date |                    |

Company Details:

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

Stock Point : Mumbai, Kandla, Chennai, Visakhapatnam, Kolkata, Fujairah, Muscat Barka

Phone +91 22 27815541 / 42 Fax +91 22 2781 1318 ::::AOH :0091 9821214367 Email [mail@rxmarine.com](mailto:mail@rxmarine.com)

2.1. Substance : VANADIUM PENTOXIDE LR CAS No : 1314-62-1 Substance. Contains no other components or impurities which will influence the classification of the product.

3.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Specific target organ toxicity — Repeated H372 exposure, Category 1 Acute toxicity (inhal.), H332 Category 4 Acute toxicity (oral), H302 Category 4 Germ cell mutagenicity, H341 Category 2 Reproductive toxicity, H361 d Category 2 Specific target organ H335 toxicity — Single exposure, Category 3, Respiratory tract irritation Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411 Full text of classification categories and H statements : see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Full text of R-phrases: see section 16 Adverse physicochemical, human health and environmental effects No additional information available

3.2. Label elements Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display Symbol(s): Xn: Harmful T : Very toxic N : Dangerous for the environment R Phrase(s): R20/22 Harmful by inhalation and if swallowed. R37: Irritating to respiratory system. R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R63: Possible risk of harm to the unborn child. R68: Possible risk of irreversible effects. S Phrase(s): S36/37 : Wear suitable protective clothing and gloves. S38: In case of insufficient ventilation, wear suitable respiratory equipment. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61: avoid release to the environment . refer to special instruction/safety data sheets. Hazard pictograms Signal word: Danger Hazard statements: H302+ H332 - Harmful if swallowed or if inhaled H335 - May cause respiratory irritation H341 - Suspected of causing genetic defects H361d - Suspected of damaging the unborn child H372 - Causes damage to organs through prolonged or repeated exposure H411 - Toxic to aquatic life with long lasting effects Precautionary statements: P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection

3.3. Other hazards No additional information available

4.1. Description of first aid measures First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Symptoms/injuries : Suspected of causing genetic defects. Causes damage to organs through prolonged or repeated exposure. Symptoms/injuries after inhalation : May cause respiratory irritation. Harmful if inhaled. Symptoms/injuries after ingestion : Harmful if swallowed. Chronic symptoms : Suspected of damaging the unborn child.

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

5.1. Extinguishing media Suitable extinguishing

media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture No additional information available 5.3. Advice for firefighters Protection during firefighting : Do not attempt to take action without suitable protective equipment. 6.1. Personal precautions, protective equipment and emergency procedures 6.1.1. For non-emergency personnel Emergency procedures : Evacuate unnecessary personnel. 6.1.2. For emergency responders Protective equipment : Use personal protective equipment as required. Emergency procedures : Stop release. 6.2. Environmental precautions Toxic to aquatic life with long lasting effects. 6.3. Methods and material for containment and cleaning up Methods for cleaning up : Clear up rapidly by scoop or vacuum. 6.4. Reference to other sections No additional information available 7.1. Precautions for safe handling Precautions for safe handling : Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray. Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling. 7.2. Conditions for safe storage, including any incompatibilities Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place. Protect from moisture. 7.3. Specific end use(s) No additional information available

8.1. Control parameters No additional information available 8.2. Exposure controls Hand protection : protective gloves Eye protection : Chemical goggles or safety glasses Skin and body protection : Wear suitable protective clothing Respiratory protection : Wear respiratory protection

9.1. Information on basic physical and chemical properties Odour threshold : No data available pH : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : 690 °C Freezing point : No data available Boiling point : 1750 °C Flash point : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available Flammability (solid, gas) : No data available Vapour pressure : No data available Relative vapour density at 20 °C : 6.3 Relative density : No data available Density : 3.36 g/cm<sup>3</sup> Solubility : Water: Slight (0.1-1%) Log Pow : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties : No data available Oxidising properties : No data available Explosive limits : No data available

9.2. Other information No additional information available 10.1. Reactivity No additional information available 10.2. Chemical stability Stable under normal conditions. 10.3. Possibility of hazardous reactions No additional information available 10.4. Conditions to avoid Direct sunlight. Air contact. Moisture. 10.5. Incompatible materials No additional information available 10.6. Hazardous decomposition products No additional information available

11.1. Information on toxicological effects Acute toxicity : Inhalation: Harmful if inhaled. Oral: Harmful if swallowed. Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Suspected of causing genetic defects. Carcinogenicity : Not classified Reproductive toxicity : Suspected of damaging the unborn child. Specific target organ toxicity (single exposure): May cause respiratory irritation. Specific target organ toxicity (repeated exposure) Causes damage to organs through prolonged or repeated exposure. Aspiration hazard : Not classified Potential adverse human health effects and symptoms: Harmful if swallowed. 12.1. Toxicity Ecology - water : Toxic to aquatic life with long lasting effects. 12.2. Persistence and degradability Persistence and degradability May cause long-term adverse effects in the environment. 12.3. Bioaccumulative potential No additional information available 12.4. Mobility in soil No additional information available 12.5. Results of PBT and vPvB assessment No additional information available 12.6. Other adverse effects No additional information available 13.1. Waste treatment methods

Product/Packaging disposal recommendations: Dispose of contents/container to ... In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number UN-No. (ADR) : 2862 UN-No. (IMDG) : 2862 UN-No. (IATA) : 2862 UN-No. (ADN) : 2862 UN-No. (RID) : 2862 14.2. UN proper shipping name Proper Shipping Name (ADR) : VANADIUM PENTOXIDE Proper Shipping Name (IMDG) : VANADIUM PENTOXIDE Proper Shipping Name (IATA) : VANADIUM PENTOXIDE Proper Shipping Name (ADN) : VANADIUM PENTOXIDE Proper Shipping Name (RID) : VANADIUM PENTOXIDE Transport document description (ADR) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS Transport document description (IMDG) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS Transport document description (IATA) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS Transport document description (ADN) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS Transport document description (RID) : UN 2862 VANADIUM PENTOXIDE, 6.1, III, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es) ADR : Transport hazard class(es) (ADR) : 6.1 Danger labels (ADR) : 6.1 IMDG : Transport hazard class(es) (IMDG) : 6.1 Danger labels (IMDG) : 6.1 IATA: Transport hazard class(es) (IATA) : 6.1 Hazard labels (IATA) : 6.1 AND: Transport hazard class(es) (ADN) : 6.1 Danger labels (ADN) : 6.1 RID: Transport hazard class(es) (RID) : 6.1 Danger labels (RID) : 6.1

14.4. Packing group Packing group (ADR) : III Packing group (IMDG) : III Packing group (IATA) : III Packing group (ADN) : III Packing group (RID) : III 14.5. Environmental hazards Dangerous for the environment : Yes Marine pollutant : Yes Other information : No supplementary information available 14.6. Special precautions for user - Overland transport Classification code (ADR) : T5 Special provision (ADR) : 600 Limited quantities (ADR) : 5kg Excepted quantities (ADR) : E1 Packing instructions (ADR) : P002, IBC08, LP02, R001 Special packing provisions (ADR) : B3 Mixed packing provisions (ADR) : MP10 Portable tank and bulk container instructions (ADR) : T1 Portable tank and bulk container special provisions (ADR) : TP33 Tank code (ADR) : SGAH Tank special provisions (ADR) : TU15, TE19 Vehicle for tank carriage : AT Transport category (ADR) : 2 Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7 Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28 Special provisions for carriage - Operation (ADR) : S9 Hazard identification number (Kemler No.) : 60 Orange plates : Tunnel restriction code (ADR) : E EAC code : 2X - Transport by sea Limited quantities (IMDG) : 5 kg Excepted

quantities (IMDG) : E1 Packing instructions (IMDG) : P002, LP02 IBC packing instructions (IMDG) : IBC08 IBC special provisions (IMDG) : B3  
 Tank instructions (IMDG) : T1 Tank special provisions (IMDG) : TP33 EmS-No. (Fire) : F-A EmS-No. (Spillage) : S-A Stowage category  
 (IMDG) : A MFAG-No : 151 - Air transport PCA Excepted quantities (IATA) : E1 PCA Limited quantities (IATA) : Y645 PCA limited quantity  
 max net quantity (IATA) : 10kg PCA packing instructions (IATA) : 670 PCA max net quantity (IATA) : 100kg CAO packing instructions (IATA) :  
 677 CAO max net quantity (IATA) : 200kg ERG code (IATA) : 6L - Inland waterway transport Classification code (ADN) : T5 Special  
 provisions (ADN) : 600, 802 Limited quantities (ADN) : 5 kg Excepted quantities (ADN) : E1 Equipment required (ADN) : PP, EP Number of  
 blue cones/lights (ADN) : 0 - Rail transport Classification code (RID) : T5 Special provision (RID) : 600 Limited quantities (RID) : 5kg  
 Excepted quantities (RID) : E1 Packing instructions (RID) : P002, IBC08, LP02, R001 Special packing provisions (RID) : B3 Mixed packing  
 provisions (RID) : MP10 Portable tank and bulk container instructions (RID) : T1 Portable tank and bulk container special provisions (RID) : TP33  
 Tank codes for RID tanks (RID) : SGAH Special provisions for RID tanks (RID) : TU15 Transport category (RID) : 2 Special provisions for  
 carriage – Bulk (RID) : VC1, VC2, AP7 Special provisions for carriage – Loading and unloading (RID) : CW13, CW28, CW31 Colis express  
 (express parcels) (RID) : CE11 Hazard identification number (RID) : 60 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the  
 IBC Code Not applicable 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1.1.  
 EU-Regulations No REACH Annex XVII restrictions VANADIUM PENTOXIDE is not on the REACH Candidate List VANADIUM PENTOXIDE is not  
 on the REACH Annex XIV List 15.1.2. National regulations Germany 12th Ordinance Implementing the Federal Immission Control Act -  
 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance) Denmark Recommendations Danish Regulation : Young people  
 below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact  
 with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use  
 and disposal 15.2. Chemical safety assessment No additional information available 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 Further information : None. In  
 accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008 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.