# Material Safety Data Sheet

**PALLADIUM NITRATE 44% PD content** (RXSOL-60-6605-164)

## 1. Product and Company Identifaction

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|---|---|
| Product Name | PALLADIUM NITRATE 44% PD content |
| Part Number | RXSOL-60-6605-164 |

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.rxmrine.com |


## 2. Composition / informationon ingredients

| Chemical Name | CAS | EC number | Weight |
|---|---|---|---|
| PALLADIUM NITRATE 44% PD content | 7697-37-2 | 231-714-2 | 230,43 g/mol |

## 3. Hazards Identification

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| Signal Word | Danger |
| Hazard Statements | H271 May cause fire or explosion; strong oxidizer.<br>H290 May be corrosive to metals.<br>H314 Causes severe skin burns and eye damage.<br>H410 Very toxic to aquatic life with long lasting effects. |
| P280 Wear protective gloves.P305 + P351 + P338 | NA |
| Precautionary statements - response | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P220 Keep away from clothing and other combustible materials.<br>P273 Avoid release to the environment.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continuerinsing. |
| Response | None |
| Disposal | NA |
| Prevention | NA |
| 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

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| 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. Call in physician. |
| Eye Contact | After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses. |
| Swallowed | After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise |
| Skin Contact | In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately |
| Inhalation: | NA |
| Ingestion: | NA |
| Notes to Physician | NA |
| If swallowed | After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise. |
| Most important symptoms and effects, both acute and delaye | The most important known symptoms and effects are described in the labelling (see section2.2) and/or in section 11 |
| Indication of any immediate medical attention and special treatment needed | No data available |

## 5. Fire-fighting Measures

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| Flammability | NA |
| Flash Point | NA |
| 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) Not combustible.<br>Has a fire-promoting effect due to release of oxygen.<br>Ambient fire may liberate hazardous vapours |
| Further information | Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system |
| Hazardous combustion products | NA |
| Advice for firefighters | Stay in danger area only with self-contained breathing apparatus. Prevent skin contact bykeeping a safe distance or by wearing suitable protective clothing. |
| Protective Equipment | NA |
| Specific Hazards Arising from the Chemical | NA |

## 6. Accidental Release Measures

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| Personal precautions, protective equipment and emergency procedures | Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. |
| Spillage | NA |
| Personal Protection | NA |
| Enviromental Precaution | Do not let product enter drains. |
| Methods and materials for containment and cleaning | Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions(see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ).Dispose of properly. Clean up affected area. |
| Reference to other sections | For disposal see section 13. |

## 7. Handling and Storage

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| Advice on safe handling | NO |
| Advice on protection against fire and explosion | Keep away from open flames, hot surfaces and sources of ignition |

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| Hygiene measures | Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. |
| Precautions for safe handling | NA |
| Conditions for safe storage, including any incompatibilities | Storage conditions No metal containers. Tightly closed. Separately or together with other oxidising substances only and away from sources of ignition and heat.Because of their oxidation potential these products can raise the burning rate of combustible substances substantially or ignite combustible substances on contact with them. |
| Storage conditions | NA |
| Storage conditions | NA |
| Storage class | Storage class (TRGS 510): 5.1A: Strongly oxidizing hazardous materials |
| Specific end use(s) | Apart from the uses mentioned in section 1.2 no other specific uses are stipulated |
| Handling | NA |
| Advice on general occupational hygiene | NA |

## 8. Exposure controls and personal protection

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| Occupational Exposure limit values | No data available |
| Biological limit values | No data available |
| Exposure controls | NA |
| Engineering Control | NA |
| Eye/face protection | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles |
| Body Protection | protective clothing |
| Skin protection | Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contactwith this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, email sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by ourcustomers. It should not be construed as offering an approval for any specific use scenario. |
| Respiratory protection | required when vapours/aerosols are generated. 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. Recommended Filter type: Filter type ABEK The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. |
| Other Protection Measure | Handle in accordance with good industrial hygiene and safety practice. |
| Control of environmental exposure | Do not let product enter drains. |
| Thermal hazards | No data available |



Gloves



Suit

## 9. Physical and chemical properties

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| Physical state | Liquid |
| Colour | Brown |
| Odour | No data available |
| Odor Threshold | Not Applicable |
| pH | Not Applicable |
| Melting Point | No data available |
| Boiling Point | No data available |
| Flash Point | No data available |
| 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 |
| Density | No data available |
| Vapour Density | No Data Available |
| Specific Gravity | No data available |
| Partition coefficient | No data available |
| Explosive properties | None |
| Solubility | at 20 °C soluble |
| Ignition temperature | No information available. |
| Particle characteristics | No data available |

## 10. Stability and reactivity

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| Reactivity | No data available |
| Stability | The product is chemically stable under standard ambient conditions (room temperature) . |
| Possibility of hazardous reactions | Violent reactions possible with:<br>The generally known reaction partners of water. |
| Conditions to avoid | No data available |
| Incompatible materials | Bases, Alkali metals, Acetic anhydride, Iron, Copper, Amines, Reducing agents, Organic materials, Alcohols, Brass, Aluminum, Corrodes steel., Acetonitrile, AcrylonitrileMetals |
| Hazardous Polymerization | In the event of fire: see section 5 |

## 11. Toxicological information

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| Acute toxicity | Oral: No data available Aldrich- 380040 Page 9 of 14 The life science business of Merck operates as MilliporeSigma in the US and Canada Acute toxicity estimate Inhalation - 4 h - 2,65 mg/l - vapor (Expert judgment) Dermal: No data available |
| Skin corrosion/irritation | Skin - Rabbit Result: Causes severe burns. Remarks: (IUCLID) Causes poorly healing wounds.. |
| Serious eye damage/eye irritation | Eyes - Rabbit Result: Causes burns. Remarks: (IUCLID) Causes serious eye damage. |
| Respiratory or skin sensitization | Maximization Test - Guinea pig |
| Rout Of Entry | NA |
| Toxicity to Animal | NA |
| Toxic Effects on Human | NA |
| Germ cell mutagenicity | Test Type: Ames test Test system: Salmonella typhimurium Result: negative |
| Reproductive toxicity | No data available |

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| Specific target organ toxicity - single exposure | No data available |
| Special Remarks on other Toxi Effects on Humans: | NA |
| Additional Information | NA |
| 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. 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 Other dangerous properties can not be excluded.<br>Handle in accordance with good industrial hygiene and safety practice. |
| Endocrine disrupting properties | 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)<br>2018/605 at levels of 0.1% or higher. 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 Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice |

## 12. Ecological information

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|---|---|
| Persistence and degradability | No data available |
| Toxicity | NA |
| Bioaccumulative potential | No data available |
| Toxicity to fish | Semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,306 mg/l - 96 h (OECD Test Guideline 203) Remarks: The value is given in analogy to the following substances: diamminedichloropalladium |
| Toxicity to daphnia and other aquatic invertebrates | Static test EC50 - Daphnia magna (Water flea) - 0,069 mg/l - 48 h (OECD Test Guideline 202) Remarks: The value is given in analogy to the following substances: diamminedichloropalladium |
| Toxicity to algae | Static test ErC50 - Pseudokirchneriella subcapitata - 0,058 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following<br>substances: diamminedichloropalladium static test NOEC - Pseudokirchneriella subcapitata - 0,002 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: diamminedichloropalladium |
| Toxicity to bacteria | static test EC50 - activated sludge - 61 mg/l - 3 h (OECD Test Guideline 209)<br>Remarks: The value is given in analogy to the following substances: diamminedichloropalladium static test NOEC - activated sludge - 18 mg/l - 3 h<br>(OECD Test Guideline 209) Remarks: The value is given in analogy to the following substances: diamminedichloropalladium |
| Eco Toxicity | Not Available |
| COD and BOD 5 | Not Available |
| Products Biodegradation: | NA |
| Mobility in soil | No Information 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 | 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. |
| 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<br>Aldrich- 380040 Page 11 of 14 The life science business of Merck operates as MilliporeSigma in the US and Canada Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| Other adverse effects | No data available |

## 13. Disposal considerations

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| **Disposal methods** | NA |
| **Contaminated packaging** | NA |
| **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

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| UN number | ADR/RID: 2031 IMDG: 2031 IATA: 2031 |
| UN proper shipping name | ADR/RID: NITRIC ACID<br>IMDG: NITRIC ACID<br>IATA: Nitric acid |
| Transport hazard class(es) | ADR/RID: 8 IMDG: 8 IATA: 8 |
| Packaging group | ADR/RID: II IMDG: II IATA: II |
| Environmental hazards | ADR/RID: no IMDG Marine pollutant: no IATA: no |
| Special precautions for user | No data available |
| Further information | NA |
| Transport in bulk according to IMOinstruments | No data available |

## 15. Regulatory information

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| 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. |
| Safety, health and environmental regulations specific for the product in question | NA |
| National legislation | Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.<br>OXIDISING LIQUIDS AND SOLIDS<br>OXIDISING LIQUIDS AND SOLIDS<br>ENVIRONMENTAL HAZARDS |
| DSCL (EEC) | NA |
| Other regulations | 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

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| Other Information | he 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. |