Product Name	: Resin Cation
Part Number	: RXSOL-32-3112-50

Company Details:

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Chemical Name

CAS Number

Weight

Diethyenyl-benzene polymer with ethenylbenzene, sulfonated

69011-22-9

65-70% De-ionized water 007732-18-5 30-35%

Signal Word Warning Hazard Statements

P261 Avoid breathing dust.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves, clothing, and eye protection.

Precautionary statements - prevention P302+P352 IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P304+P340 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305+P351+P338P312 Call a POISON CONTROL CENTER or doctor if you feel unwell.

P332+P313 If skin irritation occurs, seek medical attention. P337+P313 If eye irritation persists, get medical attention. P362+P364 Take off contaminated clothing and wash before reuse Precautionary statements - response IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage: Store locked up. Store in corrosive resistant stainless steel container with a resistant inner liner.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion: If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician. Notes to Physicians Treat symptomatically.

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment

Use personal protective equipment.

Combustion products

Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Sulfur oxides. Organic sulfonates. Hydrocarbons.

Carbon monoxide. Carbon dioxide. Benzene compounds. Advice for firefighters Wear self-contained breathing apparatus. Wear full protective equipment. Specific extinguishing methods Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Personal precautions

Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Enviromental Precaution Do not allow contact with soil, surface or ground water. If the products get into drains, inform the relevant authorities immediately. Methods and materials for containment and cleaning up Contain spilled material if possible. Sweep up. Recover spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Advice on safe handling Static electricity can accumulate on dry beads. Leave room for expansion as dry resin swells upon wetting and/or changing ionic form. Equipment construction material should be compatible with feed, regenerant, ionic form and effluent of the ion exchange process. Avoid contact with eyes. Avoid generating and breathing dust. Wash thoroughly after handling. Keep container closed. Good housekeeping and controlling of dusts are necessary for safe handling of product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage Normal warehouse storage in cool, dry area is satisfactory.

Storage temperature: 0 to 50 °C (32 to 122°F)
Recommended shelf Life: Use within 36 months

Preferred Storage temperature is in the lower half of the range given below.

Keep away from strong oxidizers.

Specific End Use(s) Apart from the uses mentioned in section 1 no other specific uses are stipulated. after use. Do not to eat, drink and smoke in work areas.

General Advice

Wash hands

Engineering Control

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below
exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Control Parameter

Contains no substances with occupational exposure limit values.

Personal Protection

Eye/face protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Under intended handling conditions, no respiratory protection should be needed. Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

Form Bead Colour Yellow Odour Odourless Boiling point and boiling range Not Flash Point Freezing Point Applicable Not Applicable Not Applicable рΗ Not Applicable Evaporation Not Applicable Flammability (solid, gas) No data available Upper explosion limit Not Applicable Lower rate explosion limit Not Applicable Explosive properties No data available Vapor pressure Not Applicable Relative vapor density Not Applicable Relative density 1.20 - 1.28 Water solubility Insoluble in water Solubility in other solvents Not Applicble Partition coefficient: octanol No data available Autoignition temperature Not Applicable Thermal decomposition Not Applicable Viscosity, kinematic Not Applicable Explosive properties Not Applicable Oxidizing properties Not Applicable

Recativity

No dangerous reaction known under conditions of normal use.

Stability

Stable under recommended storage conditions

Possibility of hazardous reactions

Polymerization will not occur.

Incompatible materials

Avoid contact with oxidizing materials. Oxidizing agents such as nitric acid attack organic exchange resins under certain conditions. Before using strong oxidizing agents, consult sources knowledgeable in handling such materials. The severity of the reaction with oxidizing materials can vary from slight degradation to an explosive reaction.

Hazardous Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds. Hydrocarbons. Organic sulfonates. Sulfur oxides.

Condition to Avoid Exposure to elevated temperatures can cause product to decompose.

Route of Exposure Sensitization, Eye contact, Skin contact Eyes

May cause slight temporary eye irritation. Solid or dust may cause irritation or corneal injury due to mechanical action

Skin Prolonged exposure not likely to cause significant skin irritation. May cause more severe response if skin is abraded (scratched Not Applicable Inhalation Vapors are unlikely due to physical properties. No adverse effects are or cut). Ingestion anticipated from inhalation. For respiratory irritation and narcotic effects: No relevant data found. As product: The LC50 has not been determined., Chronic Exposure Health injuries are not known or expected under normal use. Acute oral toxicity Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Typical for this family of materials. LD50, Rat, > 5,000 mg/kg Acute inhalation toxicity No adverse effects are anticipated from inhalation. For respiratory irritation and narcotic effects: No relevant data found. As product: The LC50 has not been determined., Acute dermal toxicity No adverse effects anticipated by skin absorption. The dermal LD50 has not been determined., Classification OSHA Hazard Communication Standard 29CFR 1910.1200.

Environmental Effects No data available Toxicity to fish Acute toxicity to fish Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life Toxicity to daphnia and others No data available Toxicity to algae No data available Biodegradability This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected. Bioaccumulative potential No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain Mobility in soil in the soil.

In the aquatic environment, material will sink and remain in the sediment.

Remarks Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Waste Disposal DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. Landfill.

Hazard Pictograms:

DOT Not regulated for transport Classification for SEA transport (IMO-IMDG): Not regulated for transport transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code Not regulated for transport Classification for AIR transport (IATA/ICAO) Not regulated for transport

OSHA Hazard Communication Standard This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by

Title III of SARA. California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances knownto the State of California to cause cancer, birth

defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S.

Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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 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.

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