1. Product and Company Identifaction

Product Name	ORG RO SCALE CONTROL
Part Number	RXSOL-33-3342-025

Company Details:

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

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

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2. Composition / Information on ingredients

Name of Substance	Cas Number	EINECS No	Wt.%
Aminotri(Methylene Phosphonic acid), sodium salt	20592-85-2	243-900-0	30 -60 %
Ammonia	1336-21-6	215-647-6	0.1 - 1.0%

3. Hazards Identification

Signal Word	None
Hazard Statements	Not Applicable
Supplementary statement	Not Applicable
Precautionary statement General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions.

4. First Aid Measures

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 fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Get medical attention immediately.
Ingestion:	Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor
Notes to Physicians	Treat symptomatically.

5. Fire-fighting Measures

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Extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment	Use personal protective equipment.
Hazardous combustionproducts	Carbon dioxide (CO2), Nitrogen oxides (NOx), Phosphorus oxides (POx), Other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes
Advice for firefighters	Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
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.

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. Wear suitable personal protective equipment.Respiratory protective equipment.
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	Stop leak if safe to do so. Contain spillage, and then collect with noncombustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

7. Handling and Storage

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Advice on safe handling	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs Use in a well-ventilated area. Avoid contact with moisture. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. DO NOT allow clothing wet with material to stay in contact with skin
Storage	Do not store near acids. Keep out of reach of children. Store in suitable labeled containers. Storage temperature : 10 °C to 30 °C
Advice on general occupational hygiene	Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas.

8. Exposure controls and personal protection

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Engineering Control	Remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the

worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure

Personal Protection

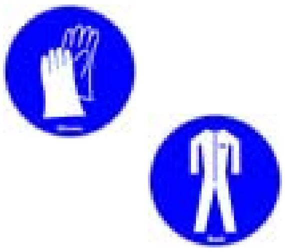
Eye protection : Wear eye protection/ face protection.
Hand protection : Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Control Paprameter & Occupational Exposure Limits (OEL)

Ingredients	CAS No	Form of exposure
Aminotri(methylene phosphonic acid), sodium salt	20592-85-2	Dermal 2.75 mg/kg bw/day (Systemic, Chronic) Inhalation 9.7 mg/m^3 (Systemic, Chronic) Dermal 2.75 mg/kg bw/day (Systemic, Acute) Inhalation 9.7 mg/m^3 (Systemic, Acute) Dermal 1.38 mg/kg bw/day (Systemic, Chronic) Inhalation 2.39 mg/m^3 (Systemic, Chronic) * Oral 1.38 mg/kg bw/day (Systemic, Chronic) * Dermal 1.38 mg/kg bw/day (Systemic, Acute) * Inhalation 2.39 mg/m^3 (Systemic, Acute) * Oral 1.38 mg/kg bw/day (Systemic, Acute) *
Ammonia	1336-21-6	TEEL 1 : 61 PPM TEEL 2 : 330 PPM TEEL 3 : 2300 PPM

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.



Gloves Suit

9. Physical and chemical properties

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Form	Liquid
Colour	Colourless to slightly Yellow
Odour	Ammonia
Boiling point and boiling range	No Data Available
Flash Point	Not Applicable / Non Flammable
Boiling Point	105°C
Freezing Point	16 °C
pH as a solution (1%)	10-11
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Explosive properties	No data available
Vapor pressure	No data available
Relative vapor density	No data available
Relative density	1.40 g/cm3 (25°C)
Water solubility	Miscible
Solubility in other solvents	No data available
Partition coefficient: octanol	No data available
Autoignition temperature	No data available
Thermal decomposition	No data available
Viscosity,	(cSt) 57.5
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
VOC	No data available

10. Stability and reactivity

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Recativity	Avoid reaction with oxidising agents
Stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Incompatible materials	Avoid to contact with Strong Acids Avoid to contact with Oxidizing agents. Store away from Aldehydes.
Hazardous Decomposition	Carbon Dioxide (CO_2) Nitrogen Oxides (NO_x) Phosphorus Oxides (PO_x)
Condition to Avoid	Contact with strong oxidizing agents and strong acid solutions. Keep away from heat/sparks/open flames / hot surfaces. Freezing temperatures.
Polymerization	Will not occur.

11. Toxicological information

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Route of Exposure	Inhalation, Eye contact, Skin contact
Eyes	Causes serious eye damage.
Skin	Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals

	following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. The acids and salts of ATMP, HEDP, and DTPMP can be considered to be of low acute dermal toxicity. ATMP acid and its tetraand pentasodium salt were practically non-toxic with LD50 values exceeding the concentrations tested. Dermal LD50 values were determined to be greater than 6310 mg active acid/kg bw. No dermal toxicity was observed for HEDP acid and its salts at the highest tested concentrations tested of 1650 mg active salt/kg bw. DTPMP compounds
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. The phosphonic acid compounds ATMP, HEDP, DTPMP and their salts can be considered to be of low to moderate acute oral toxicity. ATMP acid was of moderate acute toxicity to mammals. The acute oral LD50 in rat was determined to be2910 mg active acid/kg bw. In comparison, the tetrasodium and pentasodium salt of ATMP were less acutely toxic with LD50 values of 8610 and 7120 mg active salt/kg bw, respectively. HEDP acid and its salts are of moderate acute oral toxicity LD50's in rats and mice ranging from 1100 to 1878 mg active acid/kg bw. The oral LD50 values of HEDP salts were in a slightly wider range from 581 mg active salt/kg bw to greater than 5000 mg active salt/kg.
Inhalation	Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence. In the absence of such evidence, care should be taken nevertheless to ensure exposure is kept to a minimum and that suitable control measures be used, in an occupational setting to control vapours, fumes and aerosols.
Chronic Exposure	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Long term exposure to organophosphonate chelating agents may cause adverse effects
Acute oral toxicity	dermal (rat) LD50: >10000 mg/kg: Not Available

	Oral (Rat) LD50; >10000 mg/kg : Not Available
Acute inhalation toxicity	No data available
Acute dermal toxicity	No data available
Classification	Classification drawn from Regulation (EU) No 1272/2008 - Annex VI.

12. Ecological information

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Environmental Effects	No data available
Toxicity to fish	No data available
Toxicity to daphnia and others	No data available
Toxicity to algae	No data available
Biodegradability	Orthophosphate has been found to suppress phosphonate utilisation in many microorganisms. Thus organisms preferentially use inorganic phosphate, which may explain the low biodegradability of phosphonates in synthetic test media and natural sewage systems.The classical tests, such as the OECD screening test, BOD20 test or the closed bottle test show only a low degree of ultimate biodegradation of phosphonate derivatives. For ATMP and HEDP a DOC (Dissolved Organic Carbon) removal of 23 - 33 % was observed in an inherent biodegradability test (Zahn-Wellens test), but mineralisation was very low even after long-term incubation. However, several studies have shown that phosphonate degrading bacteria can be found in almost any environment whether soil, activated sludge or river water. At low ortho-phosphate concentration, i.e. if phosphate is the growth-limiting factor, phosphonate degradation occurs with almost complete breakdown of HEDP (94 %). DTPMP showed 60 % degradation under similar conditions. No quantitative study was done for ATMP. For Phosphate: The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available

13. Disposal considerations

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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	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility

14. Transport information

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Transport hazard class(es)

	DOT	TDG Classification	IMDG	IATA
UN Number	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
Proper	Not regulated	Not regulated	Not regulated	2Not

shipping name	for transport	for transport	for transport	regulated for transport
Transport hazard class(es)	Not regulated for transport	Not regulated for transport	Not regulated for transport	Not regulated for transport
Packing Group	Not regulated for transport	Not regulated for transport	Not regulated for transport	Not regulated for transport
Environmental hazards	NO	NO	NO	NO

Marine pollutant	No

15. Regulatory information

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Regulations	This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATP
Chemical safety assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
Further information	National Inventory Status Australia - AIIC / Australia Non-Industrial Use Yes Canada - DSL Yes Canada - NDSL No (Aminotri(methylene phosphonic acid), sodium salt; ammonia......%) China - IECSC Yes Europe - EINEC / ELINCS / NLP Yes Japan - ENCS Yes Korea - KECI Yes New Zealand - NZIoC Yes Philippines - PICCS Yes USA - TSCA Yes Taiwan - TCSI Yes Mexico - INSQ No (Aminotri(methylene phosphonic acid), sodium salt) Vietnam - NCI Yes Russia - FBEPH Yes Legend: Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

16. Other information

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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.