1. Product and Company Identifaction

Product Name	Asphaltene Inhibitor 2021
Part Number	RXSOL-81-8207-210

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

Stock Point : Mumbai, Kandla, Kolkata, Chennai, Vizag, Fujairah, Muscat

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Email	123@rxmarine.com
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2. Composition / Information on ingredients

Name of Substance	Cas Number	EC Number	Weight %
Asphaltene Inhibitor 2021	1330-20-7	215-535-7	100%

3. Hazards Identification

Signal Word	DANGER!
Hazard Statements	Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause damage to organs (Auditory system) through prolonged or repeated exposure.
Precautionary statements - prevention	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapours. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area.

	Wear protective gloves/ eye protection/ face protection.
Precautionary statements - response	IF SWALLOWED: Immediately call a POISON CENTER/ doctor. 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. Call a POISON CENTER/ doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/ attention if you feel unwell. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents and/or container to an approved waste disposal plant.
Other hazards	No data available

4. First Aid Measures

General advice	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Skin Contact	Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.
Eye Contact	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.
Inhalation:	Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is

	difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility
Ingestion	Do not induce vomiting. Call a physician and/or transport to emergency facility immediately
Most important symptoms/effects	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.
Notes to Physician	Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. Fire-fighting Measures

Suitable extinguishing media	Water fog or fine spray.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers.. Foam.. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.. Water fog, applied gently may be used as a blanket for fire extinguishment.
Unsuitable extinguishing media	Do not use direct water stream.. Straight or direct water streams may not be effective to extinguish fire..Do not use direct water stream.. Straight or direct water streams may not be effective to extinguish fire..
Special hazards arising from the substance or mixture Hazardous combustion products	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:. Phenolic compounds.. Carbon monoxide.. Carbon dioxide..
Unusual Fire and Explosion Hazards	Container may rupture from gas generation in a fire situation.. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.. Electrically ground and bond all equipment.. Flammable mixtures of

	this product are readily ignited even by static discharge.. Flammable mixtures may exist within the vapor space of containers at room temperature..
Fire Fighting Procedures	Keep people away. Isolate fire and deny unnecessary entry.. Stay upwind. Keep out of low areas where gases (fumes) can accumulate.. Water may not be effective in extinguishing fire.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles.. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container.. Do not use direct water stream. May spread fire.. Eliminate ignition sources.. Move container from fire area if this is possible without hazard.. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.. Water fog, applied gently may be used as a blanket for fire extinguishment..
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).. If protective equipment is not available or not used, fight fire from a protected location or safe distance..

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:	Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Enviromental Precaution	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning	Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Precautions for safe handling	Keep away from heat, sparks and flame. Use only with adequate ventilation. Keep container closed. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Keep container closed. See SECTION 8, Exposure Controls/Personal Protection, prior to handling.
Conditions for safe storage	Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature

8. Exposure controls and personal protection

Engineering Control	Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.
Individual protection measures	Eye/face Protection : Use chemical goggles. If exposure causes eye discomfort, use a fullface respirator. Skin and body protection :Use gloves chemically resistant to this material. Examples ofpreferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate("EVAL"). Viton. Examples of acceptable glove barrier materials include:Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Polyvinylchloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particularapplication 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/specificationsprovided by the glove supplier.

Respiratory Protection : Respiratory protection should be worn when there is a potential toexceed the exposure limit requirements or guidelines. If there are no applicable exposure limitrequirements or guidelines, use an approved respirator. Selection of air-purifying or positivepressure supplied-air will depend on the specific operation and the potential airborneconcentration of the material. For emergency conditions, use an approved positive-pressureself-contained breathing apparatus. In confined or poorly ventilated areas, use an approvedself-contained breathing apparatus or positive pressure air line with auxiliary self-contained airsupply.The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Control parameters If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Xylene	OSHA Z-1 ACGIH	TWA	435 mg/m3 100 ppm
		TWA	20 ppm
		Further information: A4: Not classifiable as a human carcinogen; Ototoxicant	
Ethylbenzene	ACGIH	ACGIH	20 ppm
		Further information: A3: Confirmed animal carcinogen with unknown relevance to humans; Ototoxicant	
	OSHA Z-1	TWA	435 mg/m3 100 ppm
Potassium hydroxide	ACGI	C	2 mg/m3

Biological occupational exposure limits

Component	CAS- No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Xylene	1330-20-7	Methylhippu ric acids	Urine	End of shift (As soon as possible after exposure ceases	1.5 g/g creatinine	ACGIH BEI
Ethylbenzene	100-41-1	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

9. Physical and chemical properties

Form	Liquid
Colour	Amber to Red-brown
Odour	Characteristic
Odor Threshold	not determined
pH	No data available
Melting Point	No data available
Freezing point	No data available
Boiling Point	140 °C (284 °F) Supplier
Flash Point	closed cup 25 °C (77 °F) Literature
Evaporation Rate	No data available
Flammability (solid, gas)	Not Applicable
Flammability (liquids)	Not expected to be a static-accumulating flammable liquid
Explosive limits	Upper Not available Lower Not available

Vapour pressure	No data available
Vapour Density	No data available
Relative Density (water = 1)	0.9 - 1.0 at 25 °C (77 °F) Literature
Decomposition Temperature	No data available
Partition coefficient	No data available
Autoignition Temperature	No data available
Solubility in Water	insoluble
Viscosity	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular Weight	No data available

10. Stability and reactivity

Recativity Hazard	No data available
Stability	Stable under recommended storage conditions. See Storage, Section 7.
Possibility of hazardous reactions	Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
Conditions to avoid	Avoid temperatures above 300°C (572°F) Potentially violent decomposition can occur above 350°C (662°F) Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid static discharge.
Incompatible materials	Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.
Hazardous Decomposition Products	Decomposition products depend upon temperature, air supply and the presence of other materials.. Gases are released during decomposition.. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water..

11. Toxicological information

Acute oral toxicity	Information for the Product: Very low toxicity if swallowed. Swallowing may result in gastrointestinal irritation. May cause choking or blockage of the digestive tract if swallowed. As product: Single dose oral LD50 has not been determined. Based on information for component(s): LD50, > 5,000 mg/kg Estimated. Information for components: Alkyl phenol formaldehyde resin Single dose oral LD50 has not been determined.

	Xylene LD50, Rat, 4,300 mg/kg Ethylbenzene LD50, Rat, 3,500 mg/kg Potassium hydroxide LD50, Rat, male, 333 mg/kg
Acute dermal toxic	Prolonged skin contact is unlikely to result in absorption of harmful amounts. As product: The dermal LD50 has not been determined. Based on information for component(s): LD50, > 2,000 mg/kg Estimated. Information for components: Alkyl phenol formaldehyde resin The dermal LD50 has not been determined. Xylene LD50, Rabbit, > 2,000 mg/kg Ethylbenzene LD50, Rabbit, 15,500 mg/kg Potassium hydroxide The dermal LD50 has not been determined.
Acute inhalation toxicity	Vapor concentrations are attainable which could be hazardous on single exposure. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. May cause respiratory irritation and central nervous system depression. In humans, symptoms may include: Lethargy Alcohol consumed before or after exposure may increase adverse effects. As product: The LC50 has not been determined. Information for components: Alkyl phenol formaldehyde resin The LC50 has not been determined. Xylene LC50, Rat, 4 Hour, vapour, 27.5 mg/l Ethylbenzene LC50, Rat, 4 Hour, vapour, 17.2 mg/l Potassium hydroxide The LC50 has not been determined.
Skin corrosion/irritation	Based on information for component(s): Brief contact may cause moderate skin irritation with local redness. Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin. Vapor may cause skin irritation. Information for components: Xylene Prolonged contact may cause skin irritation with local redness.

	Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. Vapor may cause skin irritation. May cause drying and flaking of the skin. Ethylbenzene Brief contact may cause moderate skin irritation with local redness. Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin. Potassium hydroxide Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. Effects may be delayed.
Serious eye damage/eye irritation	Based on information for component(s): May cause moderate eye irritation. Vapor may cause lacrimation (tears). Vapor may cause eye irritation experienced as mild discomfort and redness. Information for components: Xylene May cause moderate eye irritation. May cause slight temporary corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Ethylbenzene May cause moderate eye irritation. Vapor may cause lacrimation (tears). Potassium hydroxide May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Dust or mist may cause eye irritation and corneal injury. Effects may be delayed.

For skin sensitization:	Not classified based on available information.
Information for components:	Xylene For skin sensitization: No relevant data found. For respiratory sensitization: No relevant data found. Ethylbenzene Did not cause allergic skin reactions when tested in humans. For respiratory sensitization: No relevant data found. Potassium hydroxide Did not cause allergic skin reactions when tested in guinea pigs. For respiratory sensitization: No relevant data found.
Specific Target Organ Systemic Toxicity (Single Exposure)	Information for components: Xylene May cause respiratory irritation. Route of Exposure: Inhalation Target Organs: Respiratory system EthylbenzeneEvaluation of available data suggests that this material is not an STOT-SE toxicant. Potassium hydroxide Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.
Aspiration Hazard	Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. Information for components: Xylene May be fatal if swallowed and enters airways. Ethylbenzene Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways. Potassium hydroxide Aspiration into the respiratory system may occur during ingestion or vomiting. Due to

	corrosivity, tissue damage or lung injury may occur.
Specific Target Organ Systemic Toxicity (Repeated Exposure)	Information for components: Xylene In animals, effects have been reported on the following organs: Blood. Kidney. Liver. Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans. Ethylbenzene In animals, effects have been reported on the following organs: May cause hearing loss based on animal data. Kidney. LiverLung. Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect. Potassium hydroxide Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs
Carcinogenicity	Information for the Product: Product test data not available. Information for components: Xylene Xylene was not found to be carcinogenic in a National Toxicology Program bioassay in rats and mice. Ethylbenzene Ethylbenzene has been shown to cause cancer in laboratory animals. There is no evidence that these findings are relevant to humans. Potassium hydroxide No relevant data found Component List Classification Ethylbenzene IARC Group 2B: Possibly carcinogenic to humans

	ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans.
Teratogenicity	Information for components: Xylene Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects. Available data are inadequate for evaluation of maternal toxicity. EthylbenzeneHas caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in lab animals at doses nontoxic to the mother. Potassium hydroxide No relevant data found.
Reproductive toxicit	Information for the Product: Product test data not available. Information for components: Xylene In animal studies, did not interfere with reproduction. Ethylbenzene In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility. Potassium hydroxide No relevant data found.
Mutagenicity	Information for the Product: Product test data not available. Information for components: Xylene In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. Ethylbenzene In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. Potassium hydroxide In vitro mutagenicity studies were negative.

Toxicity to Fish

Xylene

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1

and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 2.6 mg/l, OECD Test

Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

IC50, Daphnia magna (Water flea), 24 Hour, 1 - 4.7 mg/l, OECD Test Guideline 202 or

Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (algae), Static, 73 Hour, Growth rate, 4.36 mg/l,

OECD Test Guideline 201 or Equivalent

NOEC, Pseudokirchneriella subcapitata (green algae), 73 Hour, Growth rate, 0.44 mg/l, OECD

Test Guideline 201 or Equivalent

Chronic toxicity to fish

NOEC, Oncorhynchus mykiss (rainbow trout), flow-through, 56 d, mortality, > 1.3 mg/lEthylbenzene

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1

and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 4.2 mg/l, OECD Test

Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), Static, 48 Hour, 1.8 - 2.4 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition (cell density

reduction), 3.6 - 4.6 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

	EC50, Bacteria, 16 Hour, > 12 mg/l
	Chronic toxicity to aquatic invertebrates
	NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, 0.96 mg/l
	Toxicity to soil-dwelling organisms
	LC50, Eisenia fetida (earthworms), 2 d, survival, 0.047 mg/cm2
Products of Biodegradation:	Xylene Biodegradability: Material is expected to be readily biodegradable.
	10-day Window: Pass
	Biodegradation: > 60 %
	Exposure time: 10 d
	Method: OECD Test Guideline 301F or EquEthylbenzene
	Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready
	biodegradability.
	10-day Window: Pass
	Biodegradation: 100 %
	Exposure time: 6 d
	Method: OECD Test Guideline 301E or Equivalent
	Theoretical Oxygen Demand: 3.17 mg/mg Estimated.
	Chemical Oxygen Demand: 2.62 mg/mg Dichromateivalent
	Theoretical Oxygen Demand: 3.17 mg/mg
Alkyl phenol formaldehyde resin Bioaccumulation	