

1. Product and Company Identification

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Product Name : **RXSOL-20-1201-210**
Product Type : **Toluene Technical Grade**

Company Details:

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

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

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Email : mail@rxmarine.com
Website : www.rxmarine.com

2. Composition / Information on ingredients

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| Name | CAS# | % by Weight |
|---------|----------|-------------|
| Toluene | 108-88-3 | 100 |

3. Hazards Identification

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Potential Acute Health Effects

Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal) by IARC. ACUTE TOXICITY: A4 (Not classifiable for human or animal) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidney, nervous system, liver, brain, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage

4. First Aid Measures

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Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention

Skin Contact

In case of contact, immediately flush skin with plenty of water. Cover the skin with an emollient. Remove contaminated clothing and shoes. Wash before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with bacterial cream. Seek immediate medical attention

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention

Serious Inhalation

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: This substance may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention

Ingestion

Do NOT induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person. If large quantities are

Serious Ingestion

material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Not available

5. Fire-fighting Measures

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Flammability of the Product

Flammable.

Auto-Ignition Temperature

480°C (896°F)

Flash Points:

CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F)

Flammable Limits

LOWER: 1.1% UPPER: 7.1%

Products of Combustion

These products are carbon oxides (CO, CO₂)

Fire Hazards in Presence of Various Substances

Risks of explosion of the product in presence of mechanical impact: Not available

Risks of explosion of the product in presence of static discharge: Not available

Fire Fighting Media and Instructions

Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical extinguishers.

LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards

Not available

Special Remarks on Explosion Hazards

Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethylhydantoin; imidazolidione; dinitrogen tetraoxide; concentrated nitric acid, sulfuric acid; nitric acid; N₂O₄; AgClO₄; BrF₃; Uranium hexafluoride; sulfur dichloride. Toluene forms an explosive mixture with tetranitromethane

6. Accidental Release Measures

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Small Spill

Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator).

Large Spill

Toxic flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Contain spillage, if safe to do so. Absorb with DRY earth, sand or other non-combustible material. Do not get water on spilled material. Remove contaminated material to a safe place. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful of fire. The product is not present at a concentration level above TLV. Check TLV in MSDS and with local authorities

7. Handling and Storage

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Precautions

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents

Storage

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame)

8. Exposure controls and personal protection

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Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the concentrations of vapors below their respective threshold limit value. Emergency eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Such protective clothing might not be sufficient; consult a specialist BEFORE using this product

Exposure Limits

TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States] 50 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 100 STEL: 100 NIOSH [United States] TWA: 375 STEL: 560 (mg/m³) from NIOSH [United States] Consult local authorities for acceptable exposure limits

9. Physical and chemical properties

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Physical state and appearance

Liquid.

Odor

Sweet, pungent, Benzene-like.

Taste

Not available.

Molecular Weight

92.14 g/mole

Color

Colorless.

pH (1% soln/water)

Not applicable.

Boiling Point

110.6°C (231.1°F)

Melting Point

-95°C (-139°F)

Critical Temperature

318.6°C (605.5°F)

Specific Gravity

0.8636 (Water = 1)

Vapor Pressure

3.8 kPa (@ 25°C)

Vapor Density

3.1 (Air = 1)

Volatility

Not available.

Odor Threshold

1.6 ppm

Water/Oil Dist. Coeff.

The product is more soluble in oil; log(oil/water) = 2.7

Ionicity (in Water)

Not available.

Dispersion Properties

See solubility in water, diethyl ether, acetone.

Solubility

Soluble in diethyl ether, acetone. Practically insoluble in cold water. Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide. Solubility in water: 0.561 g/l @ 25 deg. C.

10. Stability and reactivity

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Stability

The product is stable.

Instability Temperature

Not available

Conditions of Instability

Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances

Reactive with oxidizing agents.

Corrosivity

Non-corrosive in presence of glass.

Special Remarks on Reactivity

Incompatible with strong oxidizers, silver perchlorate, sodium dichromate, Tetranitromethane, Uranium Hexafluoride. Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C. Reacts chemically with nitrogen oxides and halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halobenzene.

Special Remarks on Corrosivity
Polymerization

products, respectively.
Not available.
Will not occur.

11. Toxicological information

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Routes of Entry

Toxicity to Animals

WARNING

toxicity (LD50)

Chronic Effects on Humans

CARCINOGENIC EFFECTS

May cause damage to the following organs

Other Toxic Effects on Humans

Special Remarks on Toxicity to Animals

Special Remarks on Chronic Effects on Humans

Special Remarks on other Toxic Effects on Humans

Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion

THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF
4-HOUR EXPOSURE. Acute oral

636 mg/kg [Rat]. Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit]
toxicity of the vapor (LC50): 440 24 hours [Mouse].

A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable
human.) by IARC.

blood, kidneys, the nervous system, liver, brain, central nervous system (C

Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
hazardous in case of skin contact (permeator).

Lowest Published Lethal Dose: LDL [Human] - Route: Oral; Dose: 50 mg
[Rabbit] - Route: Inhalation; Dose: 55000
ppm/40min

Detected in maternal milk in human. Passes through the placental barrier in
Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive
and birth defects (teratogenic). May affect genetic material (mutagenic)

Acute Potential Health Effects: Skin: Causes mild to moderate skin irri
can be absorbed to some extent through the skin. Eyes: Causes mild to m
eye irritation with a burning sensation. Splash contact with eyes als
conjunctivitis, blepharospasm, corneal edema, corneal abraisions. This
resolves in 2 days. Inhalation: Inhalation of vapor may cause respirat
irritation causing coughing and wheezing, and nasal discharge. Inhalation
concentrations may affect behavior and cause central nervous system
characterized by nausea, headache, dizziness, tremors, rest
lightheadedness, exhilaration, memory loss, insomnia, impaired reacti
drowsiness, ataxia, hallucinations, somnolence, muscle contraction or s
unconsciousness and coma. Inhalation of high concentration of vapor m
affect the cardiovascular system (rapid heart beat, heart palpitations, incr
decreased blood pressure, dysrhythmia,), respiration (acute pulmonary
respiratory depression, apnea, asphyxia), cause vision disturbances and
pupils, and cause loss of appetite. Ingestion: Aspiration hazard. Aspi
Toluene into the lungs may cause chemical pneumonitis. May cause irri
the digestive tract with nausea, vomiting, pain. May have effects similar t
acute inhalation. Chronic Potential Health Effects: Inhalation and I
Prolonged or repeated exposure via inhalation may cause central nervou
and cardiovascular symptoms similar to that of acute inhalation and ing
well liver damage/failure, kidney damage/failure (with hematuria, pro
oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigm
nucleated red blood cells, changes in white blood cell count), bone
changes, electrolyte imbalances (Hypokalemia, Hypophostatemia), severe
weakness and Rhabdomyolysis. Skin: Repeated or prolonged skin con
cause defatting dermatitis.

12. Ecological information

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| Ecotoxicity | Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 5 any hours [Fish (Goldfish)]. |
| BOD5 and COD | Not available |
| Products of Biodegradation | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
| Toxicity of the Products of Biodegradation | The products of degradation are less toxic than the product itself. |
| Special Remarks on the Products of Biodegradation | Not available. |

13. Disposal considerations

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|----------------|---|
| Waste Disposal | Waste must be disposed of in accordance with federal, state and local environmental control regulations |
|----------------|---|

14. Transport information

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|----------------------------------|---------------------------|
| DOT Classification | Flammable liquid |
| Identification | Toluene UNNA: 1294 PG: II |
| Special Provisions for Transport | Not available |

15. Regulatory information

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|-------------------------------|--|
| Federal and State Regulations | California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene California prop. 65 (no significant risk level): Toluene: 7 mg/day (value) California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value) California prop. 65 (product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute): Toluene Connecticut hazardous material survey.: Toluene Illinois toxic substance disclosure to employee act: Toluene Illinois chemical safety act: Toluene New York release reporting list: Toluene Rhode Island RTK hazardous substance list: Toluene Pennsylvania RTK: Toluene Florida: Toluene Minnesota: Toluene Michigan critical material: Toluene Massachusetts RTK: Toluene Massachusetts spill list: Toluene New Jersey: Toluene New Jersey spill list: Toluene New Jersey spill reporting: Toluene California Director's List of Hazardous Substances: Toluene TSCA 8(b) inventory: Toluene TSCA 8(d) H and S data reportable: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92 SARA 313 toxic substance notification and release reporting: Toluene CERCLA: Hazardous substance: Toluene: 1000 lbs. (453.6 kg) |
| Other Regulations | Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200) |
| OSHA | EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. |
| Other Classifications | CLASS B-2: Flammable liquid with a flash point lower than 37.8°C |
| WHMIS (Canada) | |

| | |
|---|--|
| DSCL (EEC): | CLASS D-2A: Material causing other toxic effects (VERY TOXIC). R11- Highly flammable. R20- Harmful by inhalation. S16- Keep away from sources of ignition - No smoking. S25- Avoid contact with eyes. S29- empty into drains. S33- Take precautionary measures against static discharge |
| HMIS (U.S.A.) | |
| Health Hazard | 2 |
| Fire Hazard | 3 |
| Reactivity | 0 |
| Personal Protection | h |
| National Fire Protection Association (U.S.A.) | |
| Health | 2 |
| Flammability | 3 |
| Reactivity | 0 |
| Specific hazard | |
| Protective Equipment | Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety goggles |

16. Other information www.rxmarine.com

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