Material Safety Data Sheet

Calcium Titration Solution II (RXSOL-60-6291-100)

1. Product and Company Identifaction

Product Name	RXSOL-60-6291-100
Product Type	Calcium Titration Solution II

Company Details:

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

Phone	+91 22 65113333 / 5555 / 9999
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	mail@rxmarine.com

2. Composition / informationon ingredients

SARA 313 Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
Sodium Cyanide	CAS# 143-33-9	29%	W/V	TXDS: orl-rat LD••: 6.44 mg/Kg
Water, Deionized ASTM Type II	CAS# 7732- 18-5	71%	V/V	None Established

3. Hazards Identification

May be fatal if inhaled, swallowed or absorbed thru the skin. Avoid all contact. Use with adequate ventilation. Wash thoroughly after use. Keep container closed.

Emergency Overview:Danger! Corrosive. Causes burns to any area of contact. Harmful if swallowed or inhaled. Affects the blood. May cause methemoglobinemia.

Inhalation:Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion:High concentrations cause coma and death from circulatory collapse. May convert hemoglobin to methemoglobin, producing cyanosis. May also cause nausea, vomiting, fall in blood pressure, headache, virtigo, ringing in the ears, shortness of breath.

Skin:Irritant and possible senitizer.

Eye Contact:Corrosive to the eyes. May cause severe irritation and corneal damage.

Chronic Exposure:This substance is a blood toxin, cauding hemoglobin to convert to methemoglobin, resulting in cyanosis. Lengthy or reapeated exposurd may result in decreased appetite, anemia, weight loss, nervous system affects, and kidney, liver and bone marrow damage.

Aggravated by Exposure:Persons with pre-existing disorders of the blood, skin, liver, kidneys or lungs may be at an increased risk from exposure

4. First Aid Measures

May be fatal if inhaled, swallowed or absorbed thru the skin. Avoid all contact. Use with adequate ventilation. Wash thoroughly after use. Keep container closed.

SKIN:	In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. CALL A PHYSICIAN. Thoroughly clean clothing and shoes before reuse.
EYES:	Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.
INHALATION:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

If ingested immediately give patient activated charcoal slurry. Do not induce vomiting as it could interfere with resuscitataor use.

5. Fire-fighting Measures

Fire Extinguisher Type:	Water spray , carbon dioxide, foam or dry chemical for surrounding fire.
Fire / Explosion Hazards:	Use water spray to cool fire exposed Potassium cyanide dissolves readily in water. Contain run-off to avoid enviromental /safety problems.
Fire Fighting Procedure:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

6. Accidental Release Measures

Evacuate area! Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

Spills: Ventilate Area of Leak or Spill. Allow Only Qualified Personnel to Handle Spill. Clean-Up Personnel Require Protective Clothing and Respirator Protection From Vapors.
Absorb Material with Paper Towel and Place in a Closed Container for Recovery or Disposal. Do Not Flush to Sewer! Decontaminate Liquid Residues in Spill Area with Sodium or Calcium Hypochlorite Solution. US Regulations (CERCLA) Require Reporting Spills and Releases to Soil, Water and Air in Excess of Reportable Quantities.

7. Handling and Storage

DANGER!! This material can produce DEADLY gases when mixed with acids.Store in a cool, dry, well- ventilated place away from incompatible materials.

8. Exposure controls and personal protection

Respiratory Protection	NIOSH/MSHA-approved respirator
Ventilation	Local
OTHER	Mechanical

Protective Gloves	Butyl or neoprene
EYE PROTECTION	Face shield
Other Protective Equipment	Wear appropriate clothing to prevent skin exposure

9. Physical and chemical properties

BOILING POINT	not available
VAPOR PRESSURE	Negligible
MELTING POINT	not available
VAPOR DENSITY	not available
EVAPORATION RATE	not available
Appearance /Odors	White granulers,no odor
Flash Point	N/A
Specific Gravity	Not available
Percent Volatile by Evaporation Standard	71%
Auto Ignition Temp	Not applicable
Lower Flamm. Limit in Air	Not applicable
Upper Flamm. Limit in Air	Not applicable
Solubility in Water	Soluble

10. Stability and reactivity

STABILITY	Stable
CONDITIONS TO AVOID	incompatibilities, temperature extremes
MATERIALS TO AVOID	acids,strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS	hydrogen cyanide, ammonia gases

HAZARDOUS POLYMERIZATION	Will Not Occur
Conditions to Avoid	None known

11. Toxicological information

Carcinogenic References: IARC Category- None, NTP Carcinogen - Known: No
LCLo (Inhalation) : 120 mg/m3/1 hour (man - hydrogen cyanide)
LC50 (Inhalation) : 323 ppm/5 minutes (mouse - hydrogen cyanide)
All cyanide salts are extremely toxic via ingestion. The probable oral lethal dose is 5 mg/kg, or a mere taste

(7 drops) for a 70kg person or 1 teaspoon of a 2% HCN solution.
TDLo (Ingestion) : 714 ug/kg (man)
LDLo (Ingestion) : 2857 ug/kg (man)
LD50 (Ingestion) : 6440 ug/kg (rat)

12. Ecological information

Environmental Fate:No information found

Environmental Toxicity: This material is expected to be very toxic to aquatic life. This material is expected to be very toxic to terrestrial life.

13. Disposal considerations

Cyanides must be Oxidized to Harmless Waste Before Disposal. An Alkaline Solution (pH of 10) is Treated with Chlorine or Commercial Bleach in Excess to Decompose Cyanide. When cyanide-free, it can be neutralized. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal
regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport information

DOT Classification: UN3287, Toxic Liquid, Inorganic, n.o.s. (Sodium Cyanide), 6.1, PG I

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

15. Regulatory information

Chemical Inventory Status –
Part 1:Ingrdient
Sodium Cyanide (143-33-9)

TSCA	Yes
EC	Yes
Japan	YES

Australia Yes

Chemical Inventory Status –
Part 2:Ingredient
Sodium Cyanide (143-33-9)
Korea Yes
DSL Yes
NDSL No
Phil. Yes

Federal, State & International Regulations –
Part 1: Ingredient.
Sodium Cyanide (143-33-9)
RQ 10
TPQ 100
List NO
Chemical Catg CYANIDE COMP.

Federal, State &
International Regulations –
Part 2:Ingredient
Sodium Cyanide (143-33-9)
CERCLA 10
261.33 P106
8(d) No

Chemical Weapons Convention:YES
TSCA 12 (b):No
CDTA:Yes PURE/SOLID
SARA 311/312: Acute: Yes
Chronic: Yes
Fire: No
Pressure: No
Reactivity: No
Australian Hazchem Code: 4X
Poison Schedule: 7S

16. Other information

DANGER!! This material can be FATAL !! POISON Cyanide gas may form! Take caution in handling this material . Effects of over exposure:nausea,headache,dizziness, vomiting, weakness, rapid respiration. Acute:convulsions, asphazia, dyspnea. Atazis, tremors,coma.Chronic:burns with discomfort, tearing, blurred vision, possible permanent eye damage. Target organs.blood eyes,skin, lungs may be FATAL if swallowed or inhaled or absorbed through the skin. Conditions aggravated/target organs. Central nervous system. Persons with pre-existing eye,skin or respirtory conditions may be more susceptible. If ingested antidote kit and oxygen should be administered. Immediately give patient activated charcoal slurry. Do not induce vomiting.

Flammability

Health Reactivity

Revisions	NFPA
7/30/2010	0.1 updated msds to 16 section from 10 section msds. STN
10/21/2010	0.3 Revised concentration to 29% w/v. STN
10/8/2010	0.2 Specified amount of soduim cyanide as 30% w/v. STN

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