Material Safety Data Sheet

ETHYL ENEDI AMINE 98% (RXSOL-60-6604-574)

1. Product and Company Identifaction

Product Name	RXSOL-60-6604-574
Product Type	ETHYLENEDIAMINE 98%
Revised date	

Company Details:

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

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

Phone	+91 22 27815541 / 42
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2. Composition / informationon ingredients

2.1. Substances : ETHYLENEDIAMINE
CAS-No. : 107-15-3
Substance.
Contains no other components or impurities which will influence the classification of the product

3. Hazards Identification

3.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flammable liquids, H226
Category 3
Acute toxicity (oral), H302
Category 4
Acute toxicity (dermal), H312
Category 4
Skin corrosion/irritation, H314
Category 1B
Respiratory sensitisation, H334
Category 1
Skin sensitisation, H317
Category 1
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Adverse physicochemical, human health and environmental effects
No additional information available
3.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to displayExtra classification(s) to display
Symbol(s) : Highly flammable
Xi : Irritation
. R Phrase(s) : R11: Highly flammable.
R36: Irritating to eyes.
R66: Repeated Exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.
S Phrase(s) : S9. keep container in a well ventilated place.
S16. Keep away from source of ignition-No smoking.
Hazard pictograms :
Signal word : Danger
Hazard statements : H226 - Flammable liquid and vapour
. H302+H312 - Harmful if swallowed or in contact with skin
H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary statements : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
. P310 - Immediately call a POISON CENTER/doctor
3.3. Other hazards
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

4. First Aid Measures

4.1. Description of first aid measures
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower.
Immediately call a POISON CENTER/doctor. Specific measures (see supplemental first aid instruction on this label). Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label).
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.
4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects : Causes severe skin burns and eye damage
. Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after eye contact : Causes serious eye damage
. Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.
4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomaticallY

5. Fire-fighting Measures

5.1. Extinguishing media
Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2)
Unsuitable extinguishing media : Do not use a heavy water stream.
5.2. Special hazards arising from the substance or mixture
Fire hazard : Flammable liquid and vapour.
Explosion hazard : May form flammable/explosive vapour-air mixture.
5.3. Advice for firefighters
Protection during firefighting : Do not attempt to take action without suitable protective equipment.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
6.1.1. For non-emergency personnel
Emergency procedures : Evacuate unnecessary personnel.
6.1.2. For emergency responders
Protective equipment : Use personal protective equipment as required.
Emergency procedures : Stop release.
6.2. Environmental precautions
Avoid release to the environment.
6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
6.4. Reference to other sections
No additional information available

7. Handling and Storage

7.1. Precautions for safe handling
Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid breathing dust/fume/gas/mist/vapours/spray
. Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.
7.2. Conditions for safe storage, including any incompatibilities
Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Comply with applicable regulations.
Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place.
Incompatible materials : Heat sources.
7.3. Specific end use(s)
No additional information available

8. Exposure controls and personal protection

8.1. Control parameters
No additional information available
8.2. Exposure controls
Hand protection : protective gloves
Eye protection : Chemical goggles or face shield
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of inadequate ventilation wear respiratory protection.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties
Odour threshold : No data available
pH : 12.2 at 110 g/l at 20 °C
Relative evaporation rate (butylacetate=1) : No data available
Melting point : 8.5 °C
Freezing point : No data available
Boiling point : 118 °C
Flash point : 38 °C
Auto-ignition temperature : 379 °C
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable liquid and vapour.
Vapour pressure : 13 hPa at 20 °C
Relative vapour density at 20 °C : 2.07
Relative density : No data available
Density : 0.89 g/cm³
Solubility : Water: Soluble in water
Log Pow : 2.04
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : 0.027 - 0.16 vol %
9.2. Other information
No additional information available

10. Stability and reactivity

10.1. Reactivity
Thermal decomposition generates : Corrosive vapours.
10.2. Chemical stability
Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.
10.3. Possibility of hazardous reactions
No additional information available
10.4. Conditions to avoid
Open flame. Overheating. Direct sunlight. Heat. Sparks.
10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products
May release flammable gases. Thermal decomposition generates : Corrosive vapours

11. Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 12.2 at 110 g/l at 20 °C
Serious eye damage/irritation : Serious eye damage, category 1, implicit
pH: 12.2 at 110 g/l at 20 °C
Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

12. Ecological information

12.1. Toxicity
No additional information available
12.2. Persistence and degradability
No additional information available
12.3. Bioaccumulative potential Log Pow 2.04
12.4. Mobility in soil
No additional information available
12.5. Results of PBT and vPvB assessment
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
12.6. Other adverse effects
No additional information available

13. Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal
Recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Handle empty containers with care because residual vapours are flammable.

14. Transport information

In accordance with ADR / RID / IMDG / IATA / ADN
14.1. UN number
UN-No. (ADR) : 1604
UN-No. (IMDG) : 1604
UN-No. (IATA) : 1604
UN-No. (ADN) : 1604
UN-No. (RID) : 1604
14.2. UN proper shipping name
Proper Shipping Name (ADR) : ETHYLENEDIAMINE

Proper Shipping Name (IMDG) : ETHYLENEDIAMINE
Proper Shipping Name (IATA) : Ethylenediamine
Proper Shipping Name (ADN) : ETHYLENEDIAMINE
Proper Shipping Name (RID) : ETHYLENEDIAMINE
Transport document description (ADR) : UN 1604 ETHYLENEDIAMINE, 8 (3), II, (D/E)
Transport document description (IMDG) : UN 1604 ETHYLENEDIAMINE, 8 (3), II (34°C c.c.)
Transport document description (IATA) : UN 1604 Ethylenediamine, 8 (3), II
Transport document description (ADN) : UN 1604 ETHYLENEDIAMINE, 8 (3), II
Transport document description (RID) : UN 1604 ETHYLENEDIAMINE, 8 (3), II
14.3. Transport hazard class(es)
ADR- Transport hazard class(es) (ADR) : 8(3)
Danger labels (ADR) : 8, 3
IMDG- Transport hazard class(es) (IMDG) : 8 (3)
Danger labels (IMDG) : 8, 3
IATA- Transport hazard class(es) (IATA) : 8 (3)
Hazard labels (IATA) : 8, 3
ADN- Transport hazard class(es) (ADN) : 8 (3)
Danger labels (ADN) : 8, 3
RID- Transport hazard class(es) (RID) : 8 (3)
Danger labels (RID) : 8, 3
14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II
14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available
14.6. Special precautions for user
Overland transport- Classification code (ADR) : CF1
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP2
Tank code (ADR) : L4BN Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage – Operation (ADR) : S2
Hazard identification number (Kemler No.) : 83
Orange plates :
Tunnel restriction code (ADR) : D/E
EAC code : •2W
APP code : A(fl)
Transport by sea- Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-C
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW2
Segregation (IMDG) : SG35
Flash point (IMDG) : 34°C c.c.
MFAG-No : 132
Air transport- PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L ERG code (IATA) : 8F Inland waterway transport- Classification code (ADN) : CF1 Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1
Rail transport- Classification code (RID) : CF1
Limited quantities (RID) : 1L

Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP2
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 83
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1. EU-Regulations
No REACH Annex XVII restrictions
Ethylenediamine (EDA) is on the REACH Candidate List
ETHYLENEDIAMINE For Synthesis is not on the REACH Annex XIV List
15.1.2. National regulations
Germany
Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 103)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed
Denmark
Class for fire hazard : Class II-1
Store unit : 5 liter Classification remarks : R10 ; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
15.2. Chemical safety assessment
No additional information available

16. Other information

Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
vPvB: very persistent and very bioaccumulative
Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Further information : None.
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