

## 1. Product and Company Identification

www.rxmarine.com

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

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## 2. Composition / Information on ingredients

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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

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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

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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

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### 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

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### 5.1. Extinguishing media

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Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>)

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

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## 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

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### 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**

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### 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.

### 9.1. 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/cm<sup>3</sup>

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

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### 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

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### 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

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### 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

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### 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

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In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

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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

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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) : 11

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

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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

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

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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

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Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.

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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.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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