

## 1. Product and Company Identification

www.rxmarine.com

Product Name RXSOL-60-6604-479  
Product Type DI-N-BUTYLAMINE FOR SYNTHESIS  
Revised date

### Company Details:

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

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## 2. Composition / Information on ingredients

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2.1. Substances : DI-N-BUTYLAMINE FOR SYNTHESIS

CAS-No. : 111-92-2

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, H225

Category 2

Acute toxicity (oral), H302

Category 4

Acute toxicity (dermal), H312

Category 4

Acute toxicity (inhal.), H332

Category 4

Skin corrosion/irritation, H314

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Category 1A

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) : Xi : Irritation

Xn: Harmful

Highly flammable

R Phrase(s) : R10: Flammable.

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled

H314 - Causes severe skin burns and eye damage.

Precautionary statements : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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 or doctor.

### 3.3. Other hazards

No additional information available

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## 4. First Aid Measures

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#### 4.1. Description of first aid measures

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Take off immediately all contaminated clothing.

Immediately call a POISON CENTER/doctor. Wash with plenty of water/ .

First-aid measures after eye contact : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : Harmful if inhaled.

Symptoms/effects after skin contact : Harmful in contact with skin.

Symptoms/effects after ingestion : Harmful if swallowed.

#### 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

Suitable extinguishing media : Carbon dioxide. Dry powder. Water spray. Foam.

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 enter fire area without proper protective equipment, including respiratory protection.

## 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 : Ventilate area.

## 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.

## 6.4. Reference to other sections

No additional information available

# 7. Handling and Storage

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Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Avoid contact with skin and eyes. Take precautionary measures against static discharge. Use only non-sparking tools. Keep away from sources of ignition ☒ No smoking. Do not breathe vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## 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.

Storage conditions : Keep container tightly closed. Keep in fireproof place.

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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 safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

## 9. Physical and chemical properties

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9.1. Information on basic physical and chemical properties

Odour threshold : No data available

pH : 11.1 at 1 g/l at 20 °C

Relative evaporation rate (butylacetate=1) : No data available

Melting point : -62 °C

Freezing point : No data available

Boiling point : 159 °C

Flash point : 40 °C

Auto-ignition temperature : 260 °C

Decomposition temperature : No data available

Flammability (solid, gas) : Flammable liquid and vapour.

Vapour pressure : 2.5 hPa at 20 °C

Relative vapour density at 20 °C : 4.5

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Relative density : No data available

Density : 0.76 g/cm<sup>3</sup> Solubility : Water: 4.05 g/l (25°C)

Log Pow : 2.06 Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : 0.006 - 0.068 vol %

#### 9.2. Other information

No additional information available

## 10. Stability and reactivity

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### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid Open flame. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## 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.

Inhalation: Harmful if inhaled.

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Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 11.1 at 1 g/l at 20 °C

Serious eye damage/irritation : Serious eye damage, category 1, implicit

pH: 11.1 at 1 g/l at 20 °C

Respiratory or skin sensitisation : Not classified

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 2.06

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 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

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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

UN-No. (ADR) : 2248

UN-No. (IMDG) : 2248

UN-No. (IATA) : 2248

UN-No. (ADN) : 2248

UN-No. (RID) : 2248

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : DI-N-BUTYLAMINE

Proper Shipping Name (IMDG) : DI-n-BUTYLAMINE

Proper Shipping Name (IATA) : Di-n-butylamine

Proper Shipping Name (ADN) : DI-N-BUTYLAMINE

Proper Shipping Name (RID) : DI-n-BUTYLAMINE

Transport document description (ADR) : UN 2248 DI-N-BUTYLAMINE, 8 (3), II, (D/E)

Transport document description (IMDG) : UN 2248 DI-n-BUTYLAMINE, 8 (3), II  
(39°C c.c.)

Transport document description (IATA) : UN 2248 Di-n-butylamine, 8 (3), II

Transport document description (ADN) : UN 2248 DI-N-BUTYLAMINE, 8 (3), II

Transport document description (RID) : UN 2248 DI-n-BUTYLAMINE, 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)

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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) : I1

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 : ☐3W

APP code : A(fl)

Transport by sea- Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

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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

Flash point (IMDG) : 39°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

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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

DI-N-BUTYLAMINE FOR SYNTHESIS is not on the REACH Candidate List

DI-N-BUTYLAMINE 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. 593)

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

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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.

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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