Material Safety Data Sheet

TRIBUTYLAMINE FOR SYNTHESIS99% (RXSOL-60-6605-754)

1. Product and Company Identifaction

Product Name	RXSOL-60-6605-754
Product Type	TRIBUTYLAMINE FOR SYNTHESIS 99%
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 / informationon ingredients

Substance / Preparation: TRIBUTYLAMINE 99%
CAS No :102-82-9
Substance.
Contains no other components or impurities which will influence the classification of theproduct.

3. Hazards Identification

3.1. Classifica tion of the substance or mixture
Classification EC 67/548 or EC 1999/45
Classification : T; R23/24 Xn; R22 Xi; R38 0 002 (INDIA)
Tel: Hazard Class and Category Code(s), Regulation (EC)
No 1272/2008 (CLP) Health hazards : Acute toxicity, dermal H311
Skin irritationCategory 2-- Category 3Danger
(CLP : Ac Warning (CLP : Skin Corr. 2) H315 Acute toxicity,
InhalationCategory 3ute Tox. 3) Danger (CLP : Acute Tox. 3) H331
Acute toxicity, Oral
3.2. Label elements
LabellingCategory 4Warning (CLP : Acute Tox. 4)
H302 EC 67/548 or EC 1999/45
Symbol(s) : T : Toxic R Phrase(s) : R22 : Harmful if swallowed.
R23/24 : Toxic by inhalation and in contact with skin. R38 : Irritating to
skin. S Phrase(s) and seek : S26 : In case of contact wit
h eyes, rinse immediately with plenty of water
medical advice.S36/37 : Wear suitable protective clothing and gloves
.S45 : In case of accident or if you feel unwell,
seek medical advice immediately(show the label when possible)
.Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms

Signal words: DangerHazard statements: H311 : Toxic in contact with skin.
H331 : Toxic if inhaled.H302 : Harmful if swallowed.
H315 : Causes skin irritation.Precautionary statements
• Prevention: P280: Wear protective gloves, protective clothing, eye protection, faceprotection
.P271: Use only outdoors or in a well-ventilated area.
P261: Avoid breathing dust, fume, gas, mist, vapours, spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
• Response: P302+P352: IF ON SKIN : Wash with plenty of soap and water.
P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feelunwell.
P332+P313: If skin irritation occurs : Get medical advice.
P304+P340: IF INHALED : Remove to fresh air and keep atrest in a positioncomfortable for breathing.

P363: Wash contaminated clothing before reuse.
P361: Remove immediately all contaminated clothing.
• Storage: P403+P233: Store in well-ventilated place. Keep container tightly closed.
P405: Store locked up.
•Disposal considerations: P501: Dispose of this material and its container to hazardousor
special wastecollection point, in accordance with local, regional, national and/orinternationalregulation
.P501: Dispose of this material and its container to hazardous or special
wastecollection point, in accordance with local, regional, national and/or internationalregulation
3.3. Other hazardsOther
hazards: The substance does not fulfil the criteria to be identified as PBT
substance or vPvBsubstance according to Annex XIII of Regulation REACH.

4. First Aid Measures

4.1. Description of first aid measures
Inhalation: Assure fresh air breathing. Allow the victim to rest.
Specific treatment (seeon thislabel). Remove to fresh air and keep at rest in a
position comfortable forbreathing.Immediatelycall a POISON CENTER or doctor.
Skin contact: Immediately call a POISON CENTER or doctor.
Specific treatment (seeon thislabel). Wash with plenty of soap and water.
Remove/Take off immediately allcontaminated clothing. If
skin irritation occurs : Get medical advice. Washcontaminatedclothing before reuse.
Eye contact: Rinse immediately with plenty of water.
Obtain medical attention if pain,blinking orredness persist.
Ingestion: Obtain emergency medical attention. Call a POISON CENTER or doctor ifyou feelunwell.
Do NOT induce vomiting. Rinse mouth.
4.2. Most important symptoms and effects, both acute and delayed
Symptoms relating to use: Repeated exposure to this material can result in absorptionthrough
skin causingsignificant health hazard.Danger of serious damage to health byprolonged exposure
through inhalation.Causes skin irritation.Swallowing a smallquantity of this material will result in serious health hazard
.4.3. Indication of any immediate medical attention and special treatment needed
General information: Never give anything by mouth to an unconscious person
. If youfeel unwell, seekmedical advice (show the label where possible).

5. Fire-fighting Measures

5.1. Extinguishing media
Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media: Do not use a heavy water stream.
Surrounding fires: Use water spray or fog for cooling exposed containers.
5.2. Special hazards arising from the substance or mixture
Hazardous combustion products: Under fire conditions, hazardous fumes will bepresent.
5.3. Advice for fire-fighters
Protection against fire: Do not enter fire area without proper protective
equipment,including respiratoryprotection.Special procedures: Exercise caution
when fighting any chemical fire. Avoid (reject)fire-fighting water toenter environment.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
For emergency responders: Equip cleanup crew with proper protection.Ventilate area.
For non-emergency personnel: Evacuate unnecessary personnel.
6.2. Environmental precautions
Environmental precautions: Prevent entry to sewers and public waters.
Notifyauthorities if product enterssewers or public waters.
6.3. Methods and material for containment and cleaning up
Clean up methods: Soak up spills with inert solids, such as clay or diatomaceous
earthas soon aspossible. Store away from other materials. Collect spillage.
6.4. Reference to other sections
See section8. Exposure controls/personal protection

7. Handling and Storage

7.1. Precautions for safe handling
Handling: Use only outdoors or in a well-ventilated area.
Avoid breathing dust, fume,gas,mist, vapours, spray. Do not eat, drink or smoke when using this product.
Washthoroughly after handling. Wash thoroughly after handling.
Technical protective measures: Provide good ventilation in process area to preventformation of vapour.

7.2. Conditions for safe storage, including any incompatibilities
Storage:Keep only in the original container in a cool, well ventilated place.
Keepcontainertightly closed.
Storage-away from: Strong bases. Strong acids. Sources of ignition. Direct sunlight.
7.3. Specific end use(s)
Specific end use(s): None.

8. Exposure controls and personal protection

8.1. Exposure controlsPersonal
• Respiratory protection: In case of
insufficient ventilation, wear suitable respiratoryequipment.
• Hand protection: Wear protective gloves.
• Skinprotection: Wear suitable protective clothing
.• Eye protection: Chemical goggles or safety glasses
• Others: When using, do not eat, drink or smoke
.8.2. Control parametersOccupational Exposure Limits
: No data available.protection: Avoid all unnecessary exposure.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state at 20 °C: Liquid.
Odour threshold: No data available.
pH value: No data available.
Melting point [°C]:-70°C
Decomposition point [°C]: N/A
Critical temperature [°C]:N/A
Auto-ignition temperature [°C]: 210°C
Flammability (solid, gas): N/A
Flash point [°C]: 63°C
Boiling point [°C]: 216.5°C
Initial boiling point [°C]: N/A
Final boiling point [°C]: N/A
Evaporation rate: N/A
Vapour pressure [20°C]: 0.3 mm of Hg (@20°C
Vapour pressure mm/Hg: 0.3 mm of Hg (@ 20°C
Vapour density: 6,38Density [g/cm3]: 0,7782
Relative density, gas (air=1): N/A
Relative density, liquid (water=1): N/A
Solubility in water [% weight]: Sparingly soluble in
Solubility in water: N/A
Log Pow octanol / water at 20°C: No data available.
Solubility: Strong alkalis.
Viscosity at 40°C [mm2/s]: N/A
9.2. Other information
Explosive properties: N/A
Explosion limits-upper [%]: 6%
Explosion limits-lower [%]: 1,40%
Oxidising properties:No data available.

10. Stability and reactivity

10.1. Reactivity
Reactivity: Not established.
10.2. Chemical stability
Chemical stability: Stable under recommended storage conditions.
10.3. Possibility of hazardous
reactionsHazardous reactions: Not established.
10.4. Conditions to avoid
Conditions to avoid: Direct sunlight. Extremely high or low temperatures.
10.5. Incompatible materials
Materials to avoid: Strong acids. Strong bases.
10.6. Hazardous decomposition products
Hazardous decomposition products: Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effectsAcute toxicity
• Inhalation: Toxic if inhaled.• Dermal: Toxic in contact with skin
.• Ingestion: Harmful if swallowed
.Corrosion:Based on available data, the classification criteria are not met
.Irritation: Causes skin irritation.
Sensitization: Based on available data, the classification criteria are not met.
Mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Toxic for reproduction: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity
Toxicity information: Not established.
12.2. Persistence-degradability
Persistence-degradability: Biodegradable.
12.3. Bioaccumulative potential
Bioaccumulative potential: Not established.
12.4. Mobility in soil
Mobility in soil: Not established.
12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment: The substance does not fulfil the
criteria to beidentified as PBT substance or vPvBsubstance according to Annex XIII of RegulationREACH.
12.6. Other adverse effects
Environmental precautions:Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods
General: Avoid release to the environment.
Dispose in a safe manner in accordance withlocal/national regulations.
Dispose of this material and its container to hazardous orspecial waste collectionpoint,
in accordance with local, regional, national and/orinternational regulation.
Special precautions: Hazardous waste due to toxicity.

14. Transport information

14.1. Land transport (ADR-RID)
Proper shipping name: TRIBUTYLAMINE
UN N°: 2542
H.I. nr: 60
ADR-Class: 6.1
Labelling-Transport: 6.1 : Toxic substances.
LÉADR-Classification code: T1
ADR-Group: II
ADR-Packing instructions: P001
ADR-Limited Quantity: 100
MLADR-Tunnel code: D/E : Bulkor tank carriage: Passage forbidden through tunnels ofcategory D andE.
Other carriage: Passage forbidden through tunnels of category E.
14.2. Sea transport (IMDG) [English only]
Proper shipping name: TRIBUTYLAMINE
UN N°: 2542
IMO-IMDG-Class or division: 6.1 : Toxic substances.
IMO-IMDG-Packing group: II
IMO-IMDG-Packing instructions: P001
IMO-IMDG-Limited quantities: 100 ml
IMO-IMDG-Marine pollution: NoEMS-Nr: F-A S-A
14.3. Air transport (ICAO-IATA) [English only]
Proper shipping name: TRIBUTYLAMINE
UN N°: 2542
IATA-Class or division: 6.1 : Toxic substances.
IATA-Packing group: II
IATA-Passenger and Cargo Aircraft: ALLOWED-
Passenger and Cargo-Packing: 654
instruction-Passenger and Cargo-Maximum: 5
LQuantity/PackingIATA-Cargo only: ALLOWED-
Cargo only-Packing instruction: 662

-Cargo only-Maximum Quantity/: 60 L
PackingIATA-Limited Quantites: 1 L
ERG-Nr: 6L

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for thesubstance or mixture
Safety, health and environmental: Ensure all national/local regulations are observed.
regulations/legislation specific for thesubstance or mixture
REACH Restrictions-Annex XVII: The components of this product are notsubject torestrictions.
REACH Authorisation-Annex XIV: The components of this product are not subjectto authorization.
15.2. Chemical Safety Assessment
Chemical Safety Assessment: It has not been carried out.

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. In accordance with REACH Regulation (CE) Nº 1907/2006 and with CLP Regulation (CE) Nº 1272/2008 DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling,storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only
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