Material Safety Data Sheet

TERT BUTYLAMINE FOR SYNTHESIS 99% (RXSOL-60-6605-662)

1. Product and Company Identifaction

Product Name	RXSOL-60-6605-662
Product Type	tert -BUTYLAMINE FOR SYNTHESIS 99%
Revised date	

Company Details:

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

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2. Composition / informationon ingredients

3.1 Substances : tert – BUTYLAMINE FOR SYNTHESIS 99%
Substance / Preparation : 2-Amino-2-methylpropane
CAS-No. : 75-64-9

Substance name	Contents	CAS No
tert-Butylamine	100%	75-64-9

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
Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 3), H331 Skin corrosion (Category 1A), H314
Chronic aquatic toxicity (Category 3), H412
3.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Symbol(s) : R Phrase(s) :R11 : Highly flammable.
R20/22 : Harmful by inhalation and if swallowed.
R35 : Cause severe burns.
S Phrase(s) : S16 : Keep away from source of ignition-No smoking.
S26 : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advise.
S36/37/39 : Wear suitable protective clothing and gloves & eye/face protecting.
S45: In case of accident or if you feel unwell, seek medical
advice immediately (show the label where possible).
Hazard pictograms

Signal word Danger
Hazard statement(s) H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H412 Harmful to aquatic life with long lasting effects. Precautionary statement(s)
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.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed. Supplemental Hazard Statements none

3.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

4.1 Description of first aid measures
General advice Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician. In case of skin contact Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water. Take victim immediately to hospital.
Consult a physician. In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labeling.
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. Fire-fighting Measures

5.1 Extinguishing media
Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx)
5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information Use water spray to cool unopened containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas.
Ensure adequate ventilation. Remove all sources of ignition.
Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas. For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
6.4 Reference to other sections
For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
7.2 Conditions for safe storage, including any incompatibilities Store in cool place.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage
.Handle and store under inert gas. Storage class (TRGS 510): 3: Flammable liquids
7.3 Specific end use(s)
Apart from the uses mentioned in section
1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

8.1 Control parameters
8.2 Exposure controls
Appropriate engineering controls Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Personal protective equipment Eye/face protection Tightly fitting safety goggles.

Faceshield (8-inch minimum). Use equipment for eye protection tested and approved unde
r appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection Handle with gloves. Gloves must be inspected prior to use.
Use proper glove removal technique (without touching glove's outer surface) to avoid
skin contact with this product. Dispose of contaminated gloves after use in accordance
with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the
standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from
EN 374, contact the supplier of the CE approved gloves.
This recommendation is advisory only and must be evaluated by an industrial hygienist and safety
officer familiar with the specific situation of anticipated use by our customers. It should not be construed
as offering an approval for any specific use scenario. Body Protection Complete suit protecting against chemicals,
Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the
concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Where risk
assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US)
or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection,
use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards
such as NIOSH (US) or CEN (EU). Control of environmental exposure Prevent further leakage or spillage if safe to do so.
Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties
Odour Threshold: No data available
pH :12,1 at 100 g/l at 25 °C
Melting point/freezing point Melting point/range: -67 °C - lit.
Initial boiling point and boiling range: 46 °C - lit.
Flash point -38 °C - closed cup
Evaporation rate: No data available
Flammability : (solid, gas) No data available
Upper/lower flammability or explosive limits
Upper explosion limit: 9,8 %(V) Lower
explosion limit: 1,7 %(V)
Vapour pressure 392,9 hPa at 20 °C
Vapour density : 2,53 - (Air = 1.0)
Relative density: 0,696 g/cm3 at 25 °C
Water solubility ca.: 1.000 g/l at 25 °C
Partition coefficient: noctanol/ Water
log Pow: 0,4 at 25 °C
Auto-ignition temperature : 380 °C at 1.013 hPa
Decomposition temperature : No data available
Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : No data available
9.2 Other safety information
Relative vapour density 2,53 - (Air = 1.0)

10. Stability and reactivity

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid Heat, flames and sparks.
10.5 Incompatible materials
Strong oxidizing agents, Strong acids
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. -
Carbon oxides, Nitrogen oxides (NOx) Other decomposition products -
No data available In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects Acute toxicity
LD50 Oral - Rat - male and female - 464 mg/kg (OECD Test Guideline 401) LC50
Inhalation - Rat - male - 4 h - 3,8 mg/l Skin corrosion/irritation No data available
Serious eye damage/eye irritation Eyes - Rabbit Result: Risk of serious damage to eyes.
Respiratory or skin sensitisation No data available Germ cell mutagenicity Ames test Salmonella

typhimurium Result: negative Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity No data available Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available Additional Information RTECS: EO3330000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

12.1 Toxicity
Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - 28 mg/l - 96 h(tert- Butylamine)
Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - 16 mg/l - 96 h(tert- Butylamine)
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d(tert-Butylamine)
Result: 0 % - Not biodegradable (OECD Test Guideline 301C)
12.3 Bioaccumulative potentia
l Does not bioaccumulate.
12.4 Mobility in soil
No data available(tert-Butylamine)
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects
Harmful to aquatic life with long lasting effects. No data available

13. Disposal considerations

13.1 Waste treatment methods
Product Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging Dispose of as unused product.

14. Transport information

14.1 UN number ADR/RID: 2734
IMDG: 2734
IATA: 2734
14.2 UN proper shipping name
ADR/RID: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (tert-Butylamine)
IMDG: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (tert-Butylamine)
IATA: Amines, liquid, corrosive, flammable, n.o.s. (tert-Butylamine)
14.3 Transport hazard class(es)
ADR/RID: 8 (3) IMDG: 8 (3) IATA: 8 (3)
14.4 Packaging group
ADR/RID: I IMDG: I IATA: I
14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no
14.6 Special precautions for user
No data available

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical safety assessment
For this product a chemical safety assessment was not 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
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