Material Safety Data Sheet

Tert BUTANOL LR 98.5% (RXSOL-60-6605-657)

1. Product and Company Identifaction

Product Name	RXSOL-60-6605-657
Product Type	tert-BUTANOL (2-Methylpropan-2-ol)
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

3.1. Substance : tert-BUTANOL
CAS No : 75-65-0
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, H225
Category 2
Acute toxicity (inhal.), H332
Category 4
Serious eye damage/eye irritation, H319
Category 2
Specific target organ
toxicity — Single exposure,H335
Category 3,
Respiratory tract irritation
Classification according to Directive 67/548/EEC or 1999/45/EC
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) : Xn: Harmful
Highly flammable
R Phrase(s) :R10: Flammable.
R11: Highly flammable.
S Phrase(s) :S9: keep container in a well ventilated place.
S16: Keep away from source of ignition-No smoking.
Hazard pictograms

Signal word : -
Hazard statements : H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

Precautionary statements : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/… equipment
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash ... thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
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 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER/doctor/… if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use ... to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to ...
3.3. Other hazards
No additional information available

4. First Aid Measures

4.1. Description of first aid measures
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.
4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.
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 : Highly 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 naked lights. 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 naked lights. No smoking. Use only non-sparking tools. Avoid breathing
dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash ... thoroughly after handling.
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 in fireproof place. Keep container tightly closed. Store in a well-ventilated 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 safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear appropriate mask

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties
Odour threshold : No data available
pH : 7
Relative evaporation rate (butylacetate=1) : 1.05
Melting point : 23 - 26
Freezing point : No data available
Boiling point : 83 °C
Flash point : 11 °C
Auto-ignition temperature : 480 °C
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable
Highly flammable liquid and vapour
Vapour pressure : 41 hPa at 20 °C
Relative vapour density at 20 °C : 2.6
Relative density : No data available
Density : 0.78 g/cm³
Relative gas density : 2.56
Solubility : Water: completely miscible
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : 3.35 mPa.s @ 300C
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : 0.024 - 0.08 vol %
9.2. Other information
No additional information available

10. Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Highly 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. Direct sunlight. Overheating.
10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products
May release flammable gases.

11. Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Inhalation: Harmful if inhaled.
Skin corrosion/irritation : Not classified
pH: 7
Serious eye damage/irritation : Causes serious eye irritation.
pH: 7
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : May cause respiratory irritation.
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
tert-BUTANOL For Synthesis (75-65-0)
Viscosity, kinematic 4.29487179 mm^2/s

12. Ecological information

12.1. Toxicity
No additional information available
12.2. Persistence and degradability
No additional information available
12.3. Bioaccumulative potential
No additional information available
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

13.1. Waste treatment methods
Product/Packaging disposal recommendations : Dispose of contents/container to ...
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) : 1120
UN-No. (IMDG) : 1120
UN-No.(IATA) : 1120
UN-No.(ADN) : 1120
UN-No. (RID) : 1120
14.2. UN proper shipping name
Proper Shipping Name (ADR) : BUTANOLS
Proper Shipping Name (IMDG) : BUTANOLS
Proper Shipping Name (IATA) : BUTANOLS
Proper Shipping Name (ADN) : BUTANOLS
Proper Shipping Name (RID) : BUTANOLS
Transport document description (ADR) : UN 1120 BUTANOLS, 3, II, (D/E)
Transport document description (IMDG) : UN 1120 BUTANOLS, 3, II

Transport document description (IATA) : UN 1120 BUTANOLS, 3, II
Transport document description (ADN) : UN 1120 BUTANOLS, 3, II
Transport document description (RID) : UN 1120 BUTANOLS, 3, II
14.3. Transport hazard class(es)
ADR- Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3
IMDG- Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3
IATA- Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3
ADN- Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3
RID- Transport hazard class(es) (RID) : 3
Danger labels (RID) : 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) : F1
Limited quantities (ADR) : 1L
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBF Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates :
Tunnel restriction code (ADR) : D/E
EAC code : •2YE
Transport by sea- Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP29
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
MFAG-No : 129
Air transport- PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provision (IATA) : A3
ERG code (IATA) : 3L
Inland waterway transport- Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1
Rail transport- Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

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
tert-BUTANOL is not on the REACH Candidate List
tert-BUTANOL is not on the REACH Annex XIV List
15.1.2. National regulations
Germany
AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 219)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
Denmark
Class for fire hazard : Class I-1
Store unit : 1 liter
Classification remarks : F ; 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
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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