


Material Safety Data Sheet	
tert-BUTANOL (2-Methylpropan-2-ol)	VERSION : 01 DATE OF ISSUE :02-12-2016 SUPERSEDES : Nil
Product Code :13060	Page 1 of 11

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : tert-BUTANOL(2-Methylpropan-2-ol)

Product code : 13060

Identification of the product : tert-BUTANOL(2-Methylpropan-2-ol)

CAS No : 75-65-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : MOLYCHEM

Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email : info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat Textile Co.,
Kulgaon, Badlapur (E), Dist.-Thane-421 503

2. Hazards identification

2.1. 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

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display
Extra classification(s) to display

Symbol(s) : Xn: Harmful

Highly flammable

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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 ...

2.3. Other hazards

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No additional information available

3. Composition/information on 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.

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. Firefighting 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

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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 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/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

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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

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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 mm²/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

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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

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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

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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

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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 <Flam. Liq. 2>; 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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Prepared by: MOLYCHEM (INDIA)

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