

SECTION 1 Identification

1.1. Product identifier

| | |
|---------------|---------------------------------|
| Product form | : Substance |
| Trade name | : ETBE (ETHYL TERT BUTYL ETHER) |
| Chemical name | : Ethyl tert-butyl ether |
| CAS-No. | : 637-92-3 |
| Product code | : P320 |
| Formula | : C6H14O |

1.2. Other means of identification

| | |
|----------|---|
| Synonyms | : Ether, tert-butyl ethyl / 2-Ethoxy-2-methylpropane / Propane, 2-ethoxy-2-methyl- / 2-Ethoxy-2,2-dimethylethane / ETBE / tert-Butyl ethyl ether / Ethyl tertiary-butyl ether / ethyl tert-butyl ether / Ethyl-tert-butyl ether |
| EC-No. | : 211-309-7 |

1.3. Recommended use of the chemical and restrictions on use

| | |
|------------------------------|----------------------------|
| Use of the substance/mixture | : Distribution, Fuels |
| Restrictions on use | : No information available |

1.4. Supplier's details

Braskem America, Inc.
 1735 Market Street
 Philadelphia, PA 19103-7583
 Tel: (800) 396 - 5251
 productsafety@braskem.com

1.5. Emergency phone number

| | |
|------------------|--|
| Emergency number | : CHEMTREC: +1 800 424 9300 (NORTH AMERICA) CHEMTREC International: +1 1-703-527-3887 |
|------------------|--|

SECTION 2 Hazard Identification


2.1. Classification of the substance or mixture

GHS US classification

| | |
|--|------------------------------------|
| Flammable liquid, Category 2 | Highly flammable liquid and vapor. |
| Specific target organ toxicity – Single exposure, Category 3, Narcosis | May cause drowsiness or dizziness. |

2.2. Label elements

GHS US labeling

| | |
|-----------------------------------|---|
| Hazard pictograms (GHS US) | :  |
| Signal word (GHS US) | : Danger |
| Hazard statements (GHS US) | : Highly flammable liquid and vapor May cause drowsiness or dizziness |
| Precautionary statements (GHS US) | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. |

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Avoid breathing mist, vapors, spray.
Use only outdoors or in a well-ventilated area.
Wear eye protection, protective gloves.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a doctor if you feel unwell.
In case of fire: Use dry extinguishing powder, foam, carbon dioxide (CO₂) to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, national regulation.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

Other hazards which do not result in classification : Prolonged or repeated contact with the skin may cause dermatitis.

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Name : Ethyl tert-butyl ether
CAS-No. : 637-92-3

| Name | Product identifier | % | GHS US classification |
|---------------|--------------------|-------|---|
| Ethyl alcohol | CAS-No.: 64-17-5 | < 3.5 | Flam. Liq. 2, H225 Eye Irrit. 2A, H319 |

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if necessary.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution. Remove contact lenses if easy to do. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause drowsiness or dizziness. High concentration of vapors may induce: headache, dizziness, drowsiness, nausea and vomiting.
Symptoms/effects after skin contact : Mild skin irritation. Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/effects after eye contact : May cause moderate irritation, including burning sensation, tearing, redness or swelling.
Symptoms/effects after ingestion : Sore throat. Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

Note to physician : : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : dry extinguishing powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source. Agitation can cause build up of electrostatic charge. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

Explosion hazard : Exposed to ignition source, vapors can burn in open / explode if confined. Prolonged exposure to fire may cause containers to rupture/explode.

Hazardous decomposition products in case of fire : On combustion forms: Carbon oxides (CO, CO₂). Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Fight fire remotely due to the risk of explosion. Stop leak if safe to do so. Do not approach fire except upwind and only with proper skin and respiratory protection (supplied air only). Cool adjacent tanks / containers / drums with water jet.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel. Eliminate all ignition sources if safe to do so. When using do not smoke. Use special care to avoid static electric charges.

For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing vapors, mist, spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection. Eliminate ignition sources. No smoking.

Environmental precautions : Avoid release to the environment. Do not allow to enter into surface water or drains.

6.2. Methods and materials for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Suppress the vapors given off, with vaporized water. Use non-sparking tools.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. Take precautionary measures against static discharge.

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

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SECTION 7 Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|--|
| Precautions for safe handling | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Electrostatic charges may be generated during handling. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors, mist, spray. Avoid contact with skin and eyes. |
| Hygiene measures | : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |
| Additional hazards when processed | : Handle empty containers with care because residual vapors are flammable. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. |

7.2. Conditions for safe storage, including incompatibilities

| | |
|------------------------|---|
| Technical measures | : Ground/bond container and receiving equipment. Use non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. Use explosion-proof equipment. |
| Storage conditions | : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. |
| Incompatible materials | : Oxidizing agent. Strong acids. |
| Packaging materials | : Drums. Stainless steel. Carbon steel. |

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|--|--|
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Ethyl tert-butyl ether (ETBE) |
| ACGIH® TLV® TWA | 105 mg/m ³ |
| | 25 ppm |
| Remark (ACGIH®) | TLV® Basis: URT & LRT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen) |
| ACGIH® chemical category | Not Classifiable as a Human Carcinogen |
| Regulatory reference | ACGIH 2025 |
| USA - Cal/OSHA - Occupational Exposure Limits | |
| Local name | Ethyl tert-butyl ether |
| Cal/OSHA PEL (OEL TWA) | 21 mg/m ³ |
| | 5 ppm |
| Regulatory reference | California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1) |
| Ethyl alcohol (64-17-5) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Ethanol |
| ACGIH® TLV® STEL | 1880 mg/m ³ |
| | 1000 ppm |
| Remark (ACGIH®) | TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) |

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| Ethyl alcohol (64-17-5) | |
|---|--|
| ACGIH® chemical category | Confirmed Animal Carcinogen with Unknown Relevance to Humans |
| Regulatory reference | ACGIH 2025 |
| USA - OSHA - Occupational Exposure Limits | |
| Local name | Ethyl alcohol (Ethanol) |
| OSHA PEL TWA | 1900 mg/m ³ |
| | 1000 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| USA - Cal/OSHA - Occupational Exposure Limits | |
| Local name | Ethyl alcohol; ethanol |
| Cal/OSHA PEL (OEL TWA) | 1900 mg/m ³ |
| | 1000 ppm |
| Regulatory reference | California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1) |
| USA - IDLH - Occupational Exposure Limits | |
| IDLH | 3300 ppm (10% LEL) |
| USA - NIOSH - Occupational Exposure Limits | |
| Local name | Ethyl alcohol (Ethanol) |
| NIOSH REL TWA | 1900 mg/m ³ |
| | 1000 ppm |
| NIOSH REL 10h TWA | 1000 ppm |
| Regulatory reference (US-NIOSH) | OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG)) |

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. All equipment used when handling the product must be grounded. Use explosion-proof equipment. Use only non-sparking tools. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

| Hand protection: | | | | |
|---|--------------------|----------------|----------------|-------------|
| Impermeable protective gloves. Do not reuse gloves. It is recommended that the glove supplier be consulted to ensure the protective gloves are resistant to chemicals in this product | | | | |
| Type | Material | Permeation | Thickness (mm) | Penetration |
| Disposable gloves, E.g. KCL Type: 730 or 890 or equivalent | Nitrile, or, Viton | < 480 Minutes. | 0,4 / 0,7 | Not known |
| Eye protection: | | | | |
| Chemical goggles or safety glasses | | | | |

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| Respiratory protection: | | |
|---|-------------|---|
| An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits. Consult a national health and safety authority for further guidance | | |
| Device | Filter type | Condition |
| Full face mask, with cartridge/filter | A | Concentrations exceed max allowed workplace atmospheric concentrations. |

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|--|
| Physical state | : Liquid |
| Appearance | : Clear. |
| Color | : Colorless to slightly yellow |
| Odor | : Unpleasant odor Terpenes |
| Odor threshold | : No data available |
| pH | : ≈ 6.4 |
| Melting point | : -94 °C |
| Freezing point | : No data available |
| Boiling point | : 69 - 75°C |
| Flash point | : -19 °C |
| Flammability (solid, gas) | : Solids: Not applicable. |
| Vapor pressure | : 29,45 kPa |
| Relative vapor density at 20°C | : ≈ 3.5 (15 - 32 °C) |
| Relative density | : 0,74 - 0,8 (20/4°C) |
| Density | : No data available |
| Molecular mass | : 102.17 g/mol |
| Solubility | : Water: 1,2 g/100ml @25°C Ethanol: Soluble |
| Partition coefficient n-octanol/water (Log Pow) | : 1,28 |
| Auto-ignition temperature | : 375 °C |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : < 7 mm ² /s @ 40°C |
| Viscosity, dynamic | : No data available |
| Explosion limits | : Lower explosion limit: 1.2 vol % Upper explosion limit: 7.7 vol % |
| Particle characteristics | : No data available |

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source. The product is non-reactive under normal conditions of use, storage and transport. May react violently with oxidants.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. No polymerization.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight.

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10.5. Incompatible materials

Oxidizing agent. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In case of fire: Carbon oxides (CO, CO₂).

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met).

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| | |
|-----------------------|---|
| LD50 oral rat | > 2003 mg/kg (Source: ECHA) |
| LD50 dermal rabbit | > 2 g/kg (Source: NLM_CIP) |
| LC50 Inhalation - Rat | > 5880 mg/m ³ (Exposure time: 4 h Source: NLM_CIP) |

Ethyl alcohol (64-17-5)

| | |
|-----------------------------------|------------------------------|
| LD50 oral rat | 7060 mg/kg (Source: NLM_CIP) |
| LD50 oral | 10470 mg/kg body weight |
| LD50 dermal | 15800 mg/kg body weight |
| LC50 Inhalation - Rat | 133.8 mg/l/4h |
| LC50 Inhalation - Rat (Dust/Mist) | > 99999 mg/l |
| LC50 Inhalation - Rat (Vapors) | 116.9 mg/l Source: ECHA |

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ≈ 6.4

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: ≈ 6.4

Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

ETBE (ETHYL TERT BUTYL ETHER) (637-92-3)

| | |
|--|--------------------------------------|
| IARC group | 2B - Possibly carcinogenic to humans |
| In OSHA Hazard Communication Carcinogen list | Yes |

Ethyl alcohol (64-17-5)

| | |
|------------|----------------------------|
| IARC group | 1 - Carcinogenic to humans |
|------------|----------------------------|

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Ethyl alcohol (64-17-5)

| | |
|---|---|
| NOAEL (subchronic,oral,animal/male,90 days) | < 9700 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents) |
|---|---|

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| Ethyl alcohol (64-17-5) | |
|---|---|
| NOAEL (subchronic,oral,animal/female,90 days) | > 9400 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents) |

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|--|---------------|
| Viscosity, kinematic | Not available |

| Ethyl alcohol (64-17-5) | |
|-------------------------|--------------------------|
| Viscosity, kinematic | 1.369 mm ² /s |

Symptoms/effects after inhalation : May cause drowsiness or dizziness. High concentration of vapors may induce: headache, dizziness, drowsiness, nausea and vomiting.

Symptoms/effects after skin contact : Mild skin irritation. Prolonged or repeated contact with the skin may cause dermatitis.

Symptoms/effects after eye contact : May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Symptoms/effects after ingestion : Sore throat. Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not a OSHA HazCom 2024 hazard endpoint

Hazardous to the aquatic environment, long-term (chronic) : Not a OSHA HazCom 2024 hazard endpoint

12.2. Persistence and degradability

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|--|----------------------------|
| Persistence and degradability | Not readily biodegradable. |

| Ethyl alcohol (64-17-5) | |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |

12.3. Bioaccumulative potential

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|---|--------------------------------|
| Partition coefficient n-octanol/water (Log Pow) | 1.48 – 1.56 estimated |
| Bioaccumulative potential | Low bioaccumulation potential. |

| Ethyl alcohol (64-17-5) | |
|---|-----------------------------|
| Partition coefficient n-octanol/water (Log Pow) | -0.35 (at 24 °C (at pH 7.4) |

12.4. Mobility in soil

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|--|---------------------------------------|
| Ecology - soil | Expected to be highly mobile in soil. |

12.5. Other adverse effects

Ozone : Not a OSHA HazCom 2024 hazard endpoint

Fluorinated greenhouse gases : No

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SECTION 13 Disposal considerations

| | |
|--|--|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. Can be landfilled, when in compliance with local regulations. Can be incinerated according to local regulations. |
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Additional information | : Flammable vapors may accumulate in the container. Do not re-use empty containers. Handle empty containers with care because residual vapors are flammable. |

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

| DOT | TDG | IMDG | IATA |
|---|---|--|---|
| 14.1. UN number | | | |
| UN1179 | UN1179 | 1179 | 1179 |
| 14.2. Proper Shipping Name | | | |
| Ethyl butyl ether | ETHYL BUTYL ETHER | ETHYL BUTYL ETHER | Ethyl butyl ether |
| 14.3. Transport hazard class(es) | | | |
| 3 | 3 | 3 | 3 |
|  |  |  |  |
| 14.4. Packing group | | | |
| II | II | II | II |
| 14.5. Environmental hazards | | | |
| Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No Marine pollutant: No | Dangerous for the environment: No |
| No supplementary information available | | | |

14.6. Transport in bulk

| | |
|--------------------|--------------------------|
| Product Name | : ETHYL TERT-BUTYL ETHER |
| Shipping type | : 3 |
| Pollution category | : Y |

14.7. Special precautions for user

| | |
|-------------------------------|---|
| Special transport precautions | : This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material |
|-------------------------------|---|

DOT

UN-No. (DOT) : UN1179

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| | |
|---|--|
| DOT Special Provisions (49 CFR 172.102) | : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 150 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 202 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 242 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 5 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 60 L |
| DOT Vessel Stowage Location | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| TDG | |
| UN-No. (TDG) | : UN1179 |
| Explosive Limit and Limited Quantity Index | : 1 L |
| Excepted quantities (TDG) | : E2 |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 5 L |
| Emergency Response Guide (ERG) Number | : 127 |
| IMDG | |
| 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 |
| EmS-No. (Fire) | : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS |
| EmS-No. (Spillage) | : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS |
| Stowage category (IMDG) | : B |
| Flash point (IMDG) | : -1°C c.c. |
| Properties and observations (IMDG) | : Colorless liquid. Flashpoint: -1°C c.c. Immiscible with water. |
| IATA | |
| 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 |
| ERG code (IATA) | : 3L |

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SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

| Name | CAS-No. | Listing | Commercial status | Flags |
|---------------|---------|---------|-------------------|-------|
| Ethyl alcohol | 64-17-5 | Present | Active | |

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

No additional information available

15.3. State regulations

| ETBE (ETHYL TERT BUTYL ETHER) (637-92-3) | |
|--|--|
| State or local regulations | U.S. - New Jersey - Right to Know Hazardous Substance List |

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

| Component | State or local regulations |
|------------------------|---|
| Ethyl alcohol(64-17-5) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Minnesota - Hazardous Substance List; U.S. - Massachusetts - Right To Know List; U.S. - Maine - Chemicals of Concern |

SECTION 16 Other information

according to US HazCom 2024

Revision date : 24 November 2025
Issue date : 21 March 2016

Safety Data Sheet (SDS), USA - Braskem

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is up to the user of the product company providing this SDS to and promote the training of its employees about possible risks come upon of the product. The information contained herein is not absolute, but only general information on the use of the chemical and indication of safety and security measures.