

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

| | |
|-----------------------|---|
| Product form | : Substance |
| Trade name | : MTBE HP |
| Chemical name | : methyl tert-butyl ether |
| IUPAC name | : tert-butyl methyl ether |
| EC Index-No. | : 603-181-00-X |
| EC-No. | : 216-653-1 |
| CAS-No. | : 1634-04-4 |
| REACH registration No | : 01-2119452786-27 |
| Product code | : ED09910010 |
| Type of product | : Pure substance |
| Formula | : C ₅ H ₁₂ O |
| Synonyms | : 2-methoxy-2-methylpropane / BPLA-F MTBE / ether, tert-butyl methyl / methyl t-butyl ether / methyl tert-butyl ether / methyl-tert-butyl ether / methyl-tertiary-butyl ether / MTB / MTBE / Product code 001B7348 / propane, 2-methoxy-2-methyl- / t-butyl methyl ether / tert-butyl methyl ether / tertiary-butylmethyl ether |
| Product group | : Trade product |
| BIG No | : 11340 |

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

1.2.1. Relevant identified uses

| | |
|----------------------------------|---|
| Industrial/Professional use spec | : Industrial For professional use only |
| Use of the substance/mixture | : Solvent Fuel: additive |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Monument Chemical BV B.V.B.A.
Ketenislaan 3
BE- B-9130 Kallo
Belgium
T +32 3 570 28 11
sds@monumentchemical.com - www.monumentchemical.com

1.4. Emergency telephone number

Emergency number : BIG 24h/24h: +32 14 58 45 45

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

| | |
|--|------|
| Flammable liquids, Category 2 | H225 |
| Skin corrosion/irritation, Category 2 | H315 |
| Full text of H- and EUH-statements: see section 16 | |

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P321 - Specific treatment (see information on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO₂), dry extinguishing powder, Water spray to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------------|---|--------|---|
| methyl tert-butyl ether | CAS-No.: 1634-04-4 EC-No.: 216-653-1 EC Index-No.: 603-181-00-X REACH-no: 01-2119452786-27 | ≥ 99.9 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 |

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

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according to Regulation (EU) 2015/830

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the SDS where possible). |
| First-aid measures after inhalation | : Allow affected person to breathe fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash with plenty of water/... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|--|
| Symptoms/effects after inhalation | : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Central nervous system depression. Headache. Nausea. Vomiting. Dizziness. Coordination disorders. Narcosis. Feeling of weakness. Disturbances of consciousness. Respiratory difficulties. |
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after eye contact | : Redness of the eye tissue. EXPOSURE TO HIGH CONCENTRATIONS: Lacrimation. |
| Symptoms/effects after ingestion | : Risk of aspiration pneumonia. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation. |
| Chronic symptoms | : Red skin. Dry skin. Itching. |

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting 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. |

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. |
| Hazardous decomposition products in case of fire | : Upon combustion: CO and CO ₂ are formed. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 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 open flames. No smoking. |
|------------------|---|

6.1.1. For non-emergency personnel

| | |
|----------------------|--|
| Protective equipment | : Gloves (EN 374). Protective goggles (EN 166). Head/neck protection. Protective clothing (EN 14605 or EN 13034). Large spills/in enclosed spaces: gas-tight suit (EN 943). Large spills/in enclosed spaces: self-contained breathing apparatus (EN 136 + EN 137). |
| Emergency procedures | : Evacuate unnecessary personnel. |

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
|----------------------|--|

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Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 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 : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Use only non-sparking tools.

Hygiene measures : Wash hands, forearms and face 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 only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, Incompatible materials. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. (strong) bases. halogens. peroxides.

Storage area : Meet the legal requirements. Store in a dark area. Keep container in a well-ventilated place. Fireproof storeroom. Store only in a limited quantity. Provide for a tub to collect spills. Provide the tank with earthing. May be stored under nitrogen.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: steel. stainless steel. carbon steel. copper. bronze. polyethylene. polypropylene. aluminium. glass.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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| methyl tert-butyl ether (1634-04-4) | |
|---|---|
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| IOEL TWA | 183.5 mg/m ³ |
| IOEL TWA [ppm] | 50 ppm |
| IOEL STEL | 367 mg/m ³ |
| IOEL STEL [ppm] | 100 ppm |
| Belgium - Occupational Exposure Limits | |
| OEL TWA | 146 mg/m ³ |
| OEL TWA [ppm] | 40 ppm |
| OEL STEL | 367 mg/m ³ |
| OEL STEL [ppm] | 100 ppm |
| France - Occupational Exposure Limits | |
| VME (OEL TWA) | 183.5 mg/m ³ |
| VME (OEL TWA) [ppm] | 50 ppm |
| VLE (OEL C/STEL) | 367 mg/m ³ |
| VLE (OEL C/STEL) [ppm] | 100 ppm |
| Germany - Occupational Exposure Limits (TRGS 900) | |
| Local name | (tert-Butyl)methylether |
| AGW (OEL TWA) [1] | 180 mg/m ³ |
| AGW (OEL TWA) [2] | 50 ppm |
| Peak exposure limitation factor | 1,5(l) |
| Remark | DFG,EU,Y |
| Regulatory reference | TRGS900 |
| Italy - Occupational Exposure Limits | |
| Local name | Ossido di terz-butile e metile |
| OEL TWA | 183.5 mg/m ³ |
| OEL TWA [ppm] | 50 ppm |
| OEL STEL | 357 mg/m ³ |
| OEL STEL [ppm] | 100 ppm |
| Regulatory reference | Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. |
| Netherlands - Occupational Exposure Limits | |
| Local name | tert-Butylmethylether |
| TGG-8u (OEL TWA) | 180 mg/m ³ |
| TGG-8u (OEL TWA) [ppm] | 49 ppm |
| TGG-15min (OEL STEL) | 360 mg/m ³ |
| TGG-15min (OEL STEL) [ppm] | 98 ppm |
| Regulatory reference | Arbeidsomstandighedenregeling 2021 |
| Spain - Occupational Exposure Limits | |
| Local name | Metil terc-butiléter (Éter metil-terc-butílico) |
| VLA-ED (OEL TWA) [1] | 183.5 mg/m ³ |

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| methyl tert-butyl ether (1634-04-4) | |
|--|---|
| VLA-ED (OEL TWA) [2] | 50 ppm |
| VLA-EC (OEL STEL) | 367 mg/m ³ |
| VLA-EC (OEL STEL) [ppm] | 100 ppm |
| Remark | VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país). |
| Regulatory reference | Límites de Exposición Profesional para Agentes Químicos en España 2021. INSHT |
| United Kingdom - Occupational Exposure Limits | |
| WEL TWA (OEL TWA) [1] | 183.5 mg/m ³ |
| WEL TWA (OEL TWA) [2] | 50 ppm |
| WEL STEL (OEL STEL) | 367 mg/m ³ |
| WEL STEL (OEL STEL) [ppm] | 100 ppm |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Methyl tert-butyl ether |
| ACGIH OEL TWA [ppm] | 50 ppm |
| Remark (ACGIH) | URT irr; kidney dam |
| Regulatory reference | ACGIH 2021 |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| methyl tert-butyl ether (1634-04-4) | |
|--|-------------------------|
| DNEL/DMEL (Workers) | |
| Acute - local effects, inhalation | 357 mg/m ³ |
| Long-term - systemic effects, dermal | 5100 mg/kg bw/day |
| Long-term - systemic effects, inhalation | 178.5 mg/m ³ |
| DNEL/DMEL (General population) | |
| Acute - local effects, inhalation | 214 mg/m ³ |
| Long-term - systemic effects, oral | 7.1 mg/kg bw/day |
| Long-term - systemic effects, inhalation | 53.6 mg/m ³ |
| Long-term - systemic effects, dermal | 3570 mg/kg bw/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 5.1 mg/l |
| PNEC aqua (marine water) | 0.26 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 23 mg/kg dwt |
| PNEC sediment (marine water) | 1.17 mg/kg dwt |

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| methyl tert-butyl ether (1634-04-4) | |
|-------------------------------------|----------------|
| PNEC (Soil) | |
| PNEC soil | 1.56 mg/kg dwt |
| PNEC (STP) | |
| PNEC sewage treatment plant | 71 mg/l |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves.

Other skin protection

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: polyethylene/ethylenevinylalcohol. GIVE GOOD RESISTANCE: nitrile rubber. PVA. neoprene. GIVE POOR RESISTANCE: natural rubber. butyl rubber

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : Liquid |
| Appearance | : Liquid. |
| Molecular mass | : 88.15 g/mol |
| Colour | : Colourless. |
| Odour | : Camphor odour. Ether-like odour. Peppermint odour. |
| Odour threshold | : No data available |
| pH | : 7 (4.1 %, 20 °C) |
| Relative evaporation rate (butylacetate=1) | : 8.5 |
| Relative evaporation rate (ether=1) | : 1.6 |
| Melting point | : -109 °C (1013 hPa) |

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| | |
|---|---|
| Freezing point | : No data available |
| Boiling point | : 55 °C (1013 hPa) |
| Flash point | : -28 °C (Closed cup, 1013 hPa) |
| Critical temperature | : 224 °C |
| Auto-ignition temperature | : 460 °C |
| Decomposition temperature | : No data available in the literature |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : 270 hPa (20 °C) |
| Vapour pressure at 50 °C | : 850 hPa |
| Critical pressure | : 34300 hPa |
| Relative vapour density at 20 °C | : 3.2 (20 °C) |
| Relative density | : 0.74 (20 °C) |
| Relative density of saturated gas/air mixture | : 1.5 |
| Density | : 740 kg/m ³ (20 °C) |
| Solubility | : Moderately soluble in water. Substance floats in water. Soluble in ethanol. Soluble in ether. Soluble in gasoline. Water: 4.2 g/100ml (20 °C, Equivalent or similar to OECD 105) |
| Partition coefficient n-octanol/water (Log Pow) | : 1.06 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C) |
| Viscosity, kinematic | : 0.464 mm ² /s (20 °C, OECD 114: Viscosity of Liquids) |
| Viscosity, dynamic | : No data available in the literature |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 1.6 – 8.5 vol % 60 – 310 g/m ³ |
| Lower explosive limit (LEL) | : 1.6 vol % |
| Upper explosive limit (UEL) | : 8.5 vol % |
| Particle size | : Not applicable (liquid) |

9.2. Other information

| | |
|--------------------------|--|
| Specific conductivity | : 16000 pS/m |
| Saturation concentration | : 1165 g/m ³ |
| VOC content | : 100 % |
| Other properties | : Gas/vapour heavier than air at 20°C. Clear. Highly volatile. Neutral reaction. |

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) acids. Prolonged storage: may form peroxides. This reaction is accelerated on exposure to light.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| methyl tert-butyl ether (1634-04-4) | |
|-------------------------------------|--|
| LD50 oral rat | > 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s)) |
| LC50 Inhalation - Rat | 85 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours)) |

Skin corrosion/irritation : Causes skin irritation.
pH: 7 (4.1 %, 20 °C)

Serious eye damage/irritation : Not classified
pH: 7 (4.1 %, 20 °C)

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

| methyl tert-butyl ether (1634-04-4) | |
|-------------------------------------|--|
| Viscosity, kinematic | 0.464 mm ² /s (20 °C, OECD 114: Viscosity of Liquids) |

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC).
Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Slightly harmful to crustacea (Daphnia). Slightly harmful to fishes. Groundwater pollutant.
Slightly harmful to algae. Slightly harmful to bacteria.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

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| methyl tert-butyl ether (1634-04-4) | |
|-------------------------------------|--|
| LC50 - Fish [1] | 672 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal) |
| EC50 - Crustacea [1] | 472 mg/l (US EPA, 48 h, Daphnia magna, Flow-through system, Fresh water, Experimental value, Locomotor effect) |

12.2. Persistence and degradability

| methyl tert-butyl ether (1634-04-4) | |
|-------------------------------------|------------------|
| Persistence and degradability | Not established. |

12.3. Bioaccumulative potential

| methyl tert-butyl ether (1634-04-4) | |
|---|---|
| BCF - Fish [1] | 1.5 (28 day(s), Cyprinus carpio, Flow-through system, Experimental value, Fresh weight) |
| Partition coefficient n-octanol/water (Log Pow) | 1.06 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). Not established. |

12.4. Mobility in soil

| methyl tert-butyl ether (1634-04-4) | |
|--|--|
| Surface tension | 19.3 mN/m (25 °C, 100 %, EU Method A.5: Surface tension) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 0.96 (log Koc, Calculated value) |
| Ecology - soil | Highly mobile in soil. |

12.5. Results of PBT and vPvB assessment

| methyl tert-butyl ether (1634-04-4) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |
| Results of PBT assessment | The product does not meet the PBT and vPvB classification criteria |

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|---|
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Additional information | : Handle empty containers with care because residual vapours are flammable. |
| Ecology - waste materials | : Avoid release to the environment. |
| European List of Waste (LoW) code | : 15 01 10* - packaging containing residues of or contaminated by dangerous substances 07 01 04* - other organic solvents, washing liquids and mother liquors |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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14.1 UN number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 2398 |
| UN-No. (IMDG) | : UN 2398 |
| UN-No. (IATA) | : UN 2398 |
| UN-No. (ADN) | : UN 2398 |
| UN-No. (RID) | : UN 2398 |

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : methyl tert-butyl ether |
| Proper Shipping Name (IMDG) | : Methyl-tert-butylether |
| Proper Shipping Name (IATA) | : Methyl-tert-butylether |
| Proper Shipping Name (ADN) | : METHYL TERT-BUTYL ETHER |
| Proper Shipping Name (RID) | : Methyl-tert-butylether |
| Transport document description (ADR) | : UN 2398 methyl tert-butyl ether, 3, II, (D/E) |
| Transport document description (IMDG) | : UN 2398 Methyl-tert-butylether, 3, II |
| Transport document description (IATA) | : UN 2398 Methyl-tert-butylether, 3, II |
| Transport document description (ADN) | : UN 2398 METHYL TERT-BUTYL ETHER, 3, II |
| Transport document description (RID) | : UN 2398 Methyl-tert-butylether, 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 |
| Danger 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 |

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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

| | |
|---|-----------------------------|
| Transport regulations (ADR) | : Subject to the provisions |
| Classification code (ADR) | : F1 |
| Limited quantities (ADR) | : 1I |
| Hazard identification number (Kemler No.) | : 33 |
| Orange plates | : |



| | |
|-------------------------------|--------|
| Tunnel restriction code (ADR) | : D/E |
| EAC code | : •3YE |

Transport by sea

| | |
|------------------------------|-----------------------------|
| Transport regulations (IMDG) | : Subject to the provisions |
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-D |

Air transport

| | |
|--|-----------------------------|
| Transport regulations (IATA) | : Subject to the provisions |
| PCA limited quantity max net quantity (IATA) | : 1L |
| CAO max net quantity (IATA) | : 60L |

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

| | |
|-----------------------------|-----------------------------|
| Transport regulations (RID) | : Subject to the provisions |
| Classification code (RID) | : F1 |
| Limited quantities (RID) | : 1L |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

MTBE HP

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

| EU restriction list (REACH Annex XVII) | |
|--|-------------------------|
| Reference code | Applicable on |
| 3(a) | methyl tert-butyl ether |
| 3(b) | methyl tert-butyl ether |
| 40. | methyl tert-butyl ether |

MTBE HP is not on the REACH Candidate List

MTBE HP is not on the REACH Annex XIV List

MTBE HP is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

MTBE HP is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 100 %

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Technical Instructions on Air Quality Control (TA Luft) : 5.2.5 Organic Substances

Netherlands

Waterbezwaarlijkheid : 11 - Weinig schadelijk voor in het water levende organismen

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – : The substance is not listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Switzerland

Storage class (LK) : LK 3 - Flammable liquids

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : 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.

Other information : None.

| Full text of H- and EUH-statements: | |
|-------------------------------------|-------------------------------------|
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| H225 | Highly flammable liquid and vapour. |

MTBE HP

Safety Data Sheet

according to Regulation (EU) 2015/830

Full text of H- and EUH-statements:

| | |
|---------------|---------------------------------------|
| H315 | Causes skin irritation. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |

Safety Data Sheet (SDS), EU

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