# Safety Data Sheet
**acc. to OSHA HCS**

Revision date 08/23/2024

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## 1 Identification

· **Product identifier**

· **Product Name: ASTM D4815 Peak ID Standard (1X1 mL)**

· **Part number:** RGO-422-1
· **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA

· **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

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## 2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02 Flame

| | | |
|---|---|---|
| Flammable Liquids 2 | H225 | Highly flammable liquid and vapor. |


GHS06 Skull and crossbones

| | | |
|---|---|---|
| Acute Toxicity - Dermal 3 | H311 | Toxic in contact with skin. |


GHS08 Health hazard

| | | |
|---|---|---|
| Germ Cell Mutagenicity 1B | H340 | May cause genetic defects. |
| Carcinogenicity 1A | H350 | May cause cancer. |
| Toxic to Reproduction 1B | H360 | May damage fertility or the unborn child. |
| Specific Target Organ Toxicity - Single Exposure 2 | H371 | May cause damage to the central nervous system and the visual organs. |
| Specific Target Organ Toxicity - Repeated Exposure 1 | H372 | Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure. |


GHS05 Corrosion

| | | |
|---|---|---|
| Eye Damage 1 | H318 | Causes serious eye damage. |


GHS07

| | | |
|---|---|---|
| Acute Toxicity - Inhalation 4 | H332 | Harmful if inhaled. |

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| | | |
|---|---|---|
| Skin Irritation 2 | H315 | Causes skin irritation. |
| Specific Target Organ Toxicity - Single Exposure 3 | H335-H336 | May cause respiratory irritation. May cause drowsiness or dizziness. |

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS05 GHS06 GHS08 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**
benzene
methanol
butan-1-ol
1,2-dimethoxyethane
· **Hazard statements**

| | |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H311 | Toxic in contact with skin. |
| H332 | Harmful if inhaled. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H340 | May cause genetic defects. |
| H350 | May cause cancer. |
| H360 | May damage fertility or the unborn child. |
| H371 | May cause damage to the central nervous system and the visual organs. |
| H335-H336 | May cause respiratory irritation. May cause drowsiness or dizziness. |
| H372 | Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure. |

· **Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P241 | Use explosion-proof electrical/ventilating/lighting/equipment. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P240 | Ground/bond container and receiving equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P303+P361+P353 | If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P305+P351+P338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a poison center/doctor. |
| P321 | Specific treatment (see on this label). |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |

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| | |
|---|---|
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P314 | Get medical advice/attention if you feel unwell. |
| P370+P378 | In case of fire: Use CO2, powder or water spray to extinguish. |
| P361+P364 | Take off immediately all contaminated clothing and wash it before reuse. |
| P405 | Store locked up. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**


Health = 3
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**


Health = *3
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

| · **Dangerous components:** | | |
|---|---|---|
| 64-17-5 | ethanol | 7.3% |
| 67-56-1 | methanol | 7.3% |
| 67-63-0 | propan-2-ol | 7.3% |
| 71-23-8 | propan-1-ol | 7.3% |
| 71-36-3 | butan-1-ol | 7.3% |
| 75-65-0 | 2-methylpropan-2-ol | 7.3% |
| 75-85-4 | 2-methylbutan-2-ol | 7.3% |
| 78-83-1 | butanol | 7.3% |
| 78-92-2 | butanol | 7.3% |
| 994-05-8 | tert-amyl methyl ether | 7.3% |
| 110-71-4 | 1,2-dimethoxyethane | 6.0% |
| 71-43-2 | benzene | 5.0% |
| 96-37-7 | methylcyclopentane | 4.0% |
| 108-20-3 | diisopropyl ether | 4.0% |
| 637-92-3 | propane, 2-ethoxy-2-methyl- | 4.0% |

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| | | |
|---|---|---|
| 1634-04-4 | tert-butyl methyl ether | 4.0% |

## 4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

## 5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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· **Protective Action Criteria for Chemicals**

| · **PAC-1:** | | |
|---|---|---|
| 64-17-5 | ethanol | 1,800 ppm |
| 67-56-1 | methanol | 530 ppm |
| 67-63-0 | propan-2-ol | 400 ppm |
| 71-23-8 | propan-1-ol | 250 ppm |
| 71-36-3 | butan-1-ol | 60 ppm |
| 75-65-0 | 2-methylpropan-2-ol | 150 ppm |
| 78-83-1 | butanol | 150 ppm |
| 78-92-2 | butanol | 150 ppm |
| 994-05-8 | tert-amyl methyl ether | 60 ppm |
| 110-71-4 | 1,2-dimethoxyethane | 13 ppm |
| 71-43-2 | benzene | 52 ppm |
| 96-37-7 | methylcyclopentane | 14 ppm |
| 108-20-3 | diisopropyl ether | 310 ppm |
| 1634-04-4 | tert-butyl methyl ether | 50 ppm |

| · **PAC-2:** | | |
|---|---|---|
| 64-17-5 | ethanol | 3300* ppm |
| 67-56-1 | methanol | 2,100 ppm |
| 67-63-0 | propan-2-ol | 2000* ppm |
| 71-23-8 | propan-1-ol | 670 ppm |
| 71-36-3 | butan-1-ol | 800 ppm |
| 75-65-0 | 2-methylpropan-2-ol | 1,300 ppm |
| 78-83-1 | butanol | 1,300 ppm |
| 78-92-2 | butanol | 220 ppm |
| 994-05-8 | tert-amyl methyl ether | 120 ppm |
| 110-71-4 | 1,2-dimethoxyethane | 140 ppm |
| 71-43-2 | benzene | 800 ppm |
| 96-37-7 | methylcyclopentane | 160 ppm |
| 108-20-3 | diisopropyl ether | 1700* ppm |
| 1634-04-4 | tert-butyl methyl ether | 570 ppm |

| · **PAC-3:** | | |
|---|---|---|
| 64-17-5 | ethanol | 15000* ppm |
| 67-56-1 | methanol | 7200* ppm |
| 67-63-0 | propan-2-ol | 12000** ppm |
| 71-23-8 | propan-1-ol | 4000* ppm |
| 71-36-3 | butan-1-ol | 8000** ppm |
| 75-65-0 | 2-methylpropan-2-ol | 8000* ppm |
| 78-83-1 | butanol | 8000* ppm |
| 78-92-2 | butanol | 10000** ppm |
| 994-05-8 | tert-amyl methyl ether | 170 ppm |

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| | | |
|---|---|---|
| 110-71-4 | 1,2-dimethoxyethane | 840 ppm |
| 71-43-2 | benzene | 4000* ppm |
| 96-37-7 | methylcyclopentane | 940 ppm |
| 108-20-3 | diisopropyl ether | 10000** ppm |
| 1634-04-4 | tert-butyl methyl ether | 5300* ppm |

## 7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

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## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

| **64-17-5 ethanol** | |
|---|---|
| PEL | Long-term value: 1900 mg/m³, 1000 ppm |
| REL | Long-term value: 1900 mg/m³, 1000 ppm |
| TLV | Short-term value: 1000 ppm<br>A3 |
| **67-56-1 methanol** | |
| PEL | Long-term value: 260 mg/m³, 200 ppm |
| REL | Short-term value: 325 mg/m³, 250 ppm<br>Long-term value: 260 mg/m³, 200 ppm<br>Skin |

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| | |
|---|---|
| TLV | Short-term value: 250 ppm<br>Long-term value: 200 ppm<br>Skin; BEIc |
| **67-63-0 propan-2-ol** | |
| PEL | Long-term value: 980 mg/m³, 400 ppm |
| REL | Short-term value: 1225 mg/m³, 500 ppm<br>Long-term value: 980 mg/m³, 400 ppm |
| TLV | Short-term value: 400 ppm<br>Long-term value: 200 ppm<br>BEI, A4 |
| **71-23-8 propan-1-ol** | |
| PEL | Long-term value: 500 mg/m³, 200 ppm |
| REL | Short-term value: 625 mg/m³, 250 ppm<br>Long-term value: 500 mg/m³, 200 ppm<br>Skin |
| TLV | Long-term value: 100 ppm<br>A4 |
| **71-36-3 butan-1-ol** | |
| PEL | Long-term value: 300 mg/m³, 100 ppm |
| REL | Ceiling limit value: 150 mg/m³, 50 ppm<br>Skin |
| TLV | Long-term value: 20 ppm |
| **75-65-0 2-methylpropan-2-ol** | |
| PEL | Long-term value: 300 mg/m³, 100 ppm |
| REL | Short-term value: 450 mg/m³, 150 ppm<br>Long-term value: 300 mg/m³, 100 ppm |
| TLV | Long-term value: 100 ppm<br>A4 |
| **78-83-1 butanol** | |
| PEL | Long-term value: 300 mg/m³, 100 ppm |
| REL | Long-term value: 150 mg/m³, 50 ppm |
| TLV | Long-term value: 50 ppm |
| **78-92-2 butanol** | |
| PEL | Long-term value: 450 mg/m³, 150 ppm |
| REL | Short-term value: 455 mg/m³, 150 ppm<br>Long-term value: 305 mg/m³, 100 ppm |
| TLV | Long-term value: 100 ppm |
| **994-05-8 tert-amyl methyl ether** | |
| TLV | Long-term value: 20 ppm |
| **110-71-4 1,2-dimethoxyethane** | |
| TLV | Long-term value: 0.5 ppm<br>Skin |

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| | |
|---|---|
| **71-43-2 benzene** | |
| PEL | Short-term value: 15* mg/m³, 5* ppm<br>Long-term value: 3* mg/m³, 1* ppm<br>*table Z-2 for exclusions in 29CFR1910.1028(d) |
| REL | Short-term value: 1 ppm<br>Long-term value: 0.1 ppm<br>See Pocket Guide App. A |
| TLV | Long-term value: 0.02 ppm<br>Skin; BEI, A1 |
| **96-37-7 methylcyclopentane** | |
| REL | Long-term value: 350 mg/m³, 100 ppm<br>Ceiling limit value: 1800* mg/m³, 510* ppm<br>*15-min |
| TLV | Short-term value: 3500 mg/m³, 1000 ppm<br>Long-term value: 1760 mg/m³, 500 ppm |
| **108-20-3 diisopropyl ether** | |
| PEL | Long-term value: 2100 mg/m³, 500 ppm |
| REL | Long-term value: 2100 mg/m³, 500 ppm |
| TLV | Short-term value: (310) ppm<br>Long-term value: (250) NIC-20 ppm<br>NIC-A4 |
| **637-92-3 propane, 2-ethoxy-2-methyl-** | |
| TLV | Long-term value: 25 ppm<br>A4 |
| **1634-04-4 tert-butyl methyl ether** | |
| TLV | Long-term value: 50 ppm<br>A3 |

| · **Ingredients with biological limit values:** | |
|---|---|
| **67-56-1 methanol** | |
| BEI | 15 mg/L<br>Medium: urine<br>Time: end of shift<br>Parameter: Methanol (background, nonspecific) |
| **67-63-0 propan-2-ol** | |
| BEI | 40 mg/L<br>Medium: urine<br>Time: end of shift at end of workweek<br>Parameter: Acetone (background, nonspecific) |

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| **71-43-2 benzene** | |
|---|---|
| BEI | 25 µg/g creatinine<br>Medium: urine<br>Time: end of shift Parameter<br>Parameter: S-Phenylmercapturic acid (background<br><br>500 µg/g creatinine<br>Medium: urine<br>Time: end of shift<br>Parameter: t,t-Muconic acid (background) |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: >4 hours
· **Eye protection:**

Tightly sealed goggles



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## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | Fluid |
| **Color:** | According to product specification |
| · **Odor:** | Characteristic |
| · **Odor threshold:** | Not determined. |
| · **pH-value:** | Not determined. |
| · **Change in condition** | |
| **Melting point/Melting range:** | Undetermined. |
| **Boiling point/Boiling range:** | 64 °C (147.2 °F) |
| · **Flash point:** | -11 °C (12.2 °F) |
| · **Flammability (solid, gaseous):** | Highly flammable. |
| · **Auto igniting:** | 200 °C (392 °F) |
| · **Decomposition temperature:** | Not determined. |
| · **Ignition temperature:** | Product is not selfigniting. |
| · **Danger of explosion:** | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · **Explosion limits:** | |
| **Lower:** | Not determined. |
| **Upper:** | Not determined. |
| · **Vapor pressure:** | Not determined. |
| · **Density at 20 °C (68 °F):** | 0.79564 g/cm³ (6.63962 lbs/gal) |
| · **Relative density** | Not determined. |
| · **Vapor density** | Not determined. |
| · **Evaporation rate** | Not determined. |
| · **Solubility in / Miscibility with** | |
| **Water:** | Not miscible or difficult to mix. |
| · **Partition coefficient (n-octanol/water):** | Not determined. |
| · **Viscosity:** | |
| **Dynamic:** | Not determined. |
| **Kinematic:** | Not determined. |
| · **Solvent content:** | |
| **Organic solvents:** | 70.1 % |
| **VOC content:** | 70.10 %<br>557.7 g/l / 4.65 lb/gal |
| · **Other information** | No further relevant information available. |

## 10 Stability and reactivity

· **Reactivity** No further relevant information available.

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· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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## 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

| · **LD/LC50 values that are relevant for classification:** | | |
|---|---|---|
| **ATE (Acute Toxicity Estimate)** | | |
| Oral | LD50 | 3,030 mg/kg |
| Dermal | LD50 | 924 mg/kg |
| Inhalative | LC50/4 h | >18.6 mg/L |

| **64-17-5 ethanol** | | |
|---|---|---|
| Oral | LD50 | >5,000 mg/kg (rat) |
| Inhalative | LC50/4 h | 20,000 mg/L (rat) |
| **67-56-1 methanol** | | |
| Oral | LD50 | 5,628 mg/kg (rat) |
| Dermal | LD50 | 15,800 mg/kg (rabbit) |
| **67-63-0 propan-2-ol** | | |
| Oral | LD50 | 4,710 mg/kg (rat) |
| Dermal | LD50 | 12,800 mg/kg (rat) |
| | | 12,800 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 72.6 mg/L (rat) |
| **71-23-8 propan-1-ol** | | |
| Oral | LD50 | 1,870 mg/kg (rat) |
| Dermal | LD50 | 4,055 mg/kg (rat) |
| | | 5,040 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 33.8 mg/L (rat) |
| **71-36-3 butan-1-ol** | | |
| Oral | LD50 | 790 mg/kg (rat) |
| Dermal | LD50 | 3,400 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 8,000 mg/L (rat) |
| **75-65-0 2-methylpropan-2-ol** | | |
| Oral | LD50 | 2,743 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rabbit) |
| **75-85-4 2-methylbutan-2-ol** | | |
| Oral | LD50 | 1,000 mg/kg (rat) |

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| | | |
|---|---|---|
| **78-83-1 butanol** | | |
| Oral | LD50 | 2,460 mg/kg (rat) |
| Dermal | LD50 | 2,460 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 19.2 mg/L (rat) |
| **78-92-2 butanol** | | |
| Oral | LD50 | 2,193 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rat) |
| **994-05-8 tert-amyl methyl ether** | | |
| Oral | LD50 | 1,602 mg/kg (rat) |
| Inhalative | LC50/4 h | >5,400 mg/L (rat) |
| **110-71-4 1,2-dimethoxyethane** | | |
| Oral | LD50 | 5,370 mg/kg (rat) |
| Dermal | LD50 | >5,000 mg/kg (rat) |
| **71-43-2 benzene** | | |
| Oral | LD50 | 3,340 mg/kg (rat) |
| Dermal | LD50 | 48 mg/kg (mouse) |
| | | >8,260 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 9,980 mg/L (mouse) |
| **108-20-3 diisopropyl ether** | | |
| Oral | LD50 | 8,470 mg/kg (rat) |
| Dermal | LD50 | 20,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 162 mg/L (rat) |
| **637-92-3 propane, 2-ethoxy-2-methyl-** | | |
| Oral | LD50 | >2,003 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | >5.88 mg/L (rat) |
| **1634-04-4 tert-butyl methyl ether** | | |
| Oral | LD50 | 4,000 mg/kg (rat) |
| Dermal | LD50 | 1,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 23,576 mg/L (rat) |

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Harmful
Irritant
The product can cause inheritable damage.

· **Carcinogenic categories**

| · **IARC (International Agency for Research on Cancer)** | | |
|---|---|---|
| 64-17-5 | ethanol | 1 |

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# Safety Data Sheet
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| | | |
|---|---|---|
| 67-63-0 | propan-2-ol | 3 |
| 71-43-2 | benzene | 1 |
| 1634-04-4 | tert-butyl methyl ether | 3 |

| · **NTP (National Toxicology Program)** | | |
|---|---|---|
| 71-43-2 | benzene | K |

| · **OSHA-Ca (Occupational Safety & Health Administration)** | |
|---|---|
| 71-43-2 | benzene |

## 12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

* 
## 14 Transport information

| · **Not Regulated, De minimis Quantities** | - |
|---|---|
| · **UN-Number**<br>· **DOT, IMDG, IATA** | UN1992 |
| · **UN proper shipping name**<br>· **DOT** | Flammable liquids, toxic, n.o.s. (Methanol, tert-amyl methyl ether) |

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| | |
|---|---|
| · **IMDG, IATA** | FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, tert-amyl methyl ether) |
| · **Transport hazard class(es)** | |
| · **DOT** | |
|   | |
| · **Class** | 3 Flammable liquids |
| · **Label** | 3, 6.1 |
| · **IMDG** | |
|   | |
| · **Class** | 3 Flammable liquids |
| · **Label** | 3/6.1 |
| · **IATA** | |
|   | |
| · **Class** | 3 Flammable liquids |
| · **Label** | 3 (6.1) |
| · **Packing group** | |
| · **DOT, IMDG, IATA** | II |
| · **Environmental hazards:** | Not applicable. |
| · **Special precautions for user** | Warning: Flammable liquids |
| · **Hazard identification number (Kemler code):** | 336 |
| · **EMS Number:** | F-E,S-D |
| · **Stowage Category** | B |
| · **Stowage Code** | SW2 Clear of living quarters. |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| · **Transport/Additional information:** | |
| · **DOT** | |
| · **Quantity limitations** | On passenger aircraft/rail: 1 L<br>On cargo aircraft only: 60 L |
| · **IMDG** | |
| · **Limited quantities (LQ)** | 1L |
| · **Excepted quantities (EQ)** | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |

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| · **UN "Model Regulation":** | UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, TERT-AMYL METHYL ETHER), 3 (6.1), II |
|---|---|

* 

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

| | |
|---|---|
| 67-56-1 | methanol |
| 67-63-0 | propan-2-ol |
| 71-36-3 | butan-1-ol |
| 75-65-0 | 2-methylpropan-2-ol |
| 78-92-2 | butanol |
| 110-71-4 | 1,2-dimethoxyethane |
| 71-43-2 | benzene |
| 1634-04-4 | tert-butyl methyl ether |

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

| | |
|---|---|
| 67-56-1 | methanol |
| 71-43-2 | benzene |
| 1634-04-4 | tert-butyl methyl ether |

· **Proposition 65**

· **Chemicals known to cause cancer:**

| | |
|---|---|
| 71-43-2 | benzene |

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

| | |
|---|---|
| 71-43-2 | benzene |

· **Chemicals known to cause developmental toxicity:**

| | |
|---|---|
| 64-17-5 | ethanol |
| 67-56-1 | methanol |
| 71-43-2 | benzene |

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

| | | |
|---|---|---|
| 71-36-3 | butan-1-ol | D |
| 75-65-0 | 2-methylpropan-2-ol | SC |
| 71-43-2 | benzene | A, K/L |

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| | | |
|---|---|---|
| 637-92-3 | propane, 2-ethoxy-2-methyl- | SC |

| · **TLV (Threshold Limit Value)** | | |
|---|---|---|
| 64-17-5 | ethanol | A3 |
| 67-63-0 | propan-2-ol | A4 |
| 71-23-8 | propan-1-ol | A4 |
| 75-65-0 | 2-methylpropan-2-ol | A4 |
| 71-43-2 | benzene | A1 |
| 1634-04-4 | tert-butyl methyl ether | A3 |

| · **NIOSH-Ca (National Institute for Occupational Safety and Health)** | |
|---|---|
| 71-43-2 | benzene |

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials:**
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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## 16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Department issuing SDS:** Document Control / Regulatory
· **Contact:** pdl-acg-regulatory-cq@agilent.com
· **Date of preparation / last revision** 08/23/2024 / 3
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2
Acute Toxicity - Dermal 3: Acute toxicity – Category 3
Acute Toxicity - Inhalation 4: Acute toxicity – Category 4
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

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Carcinogenicity 1A: Carcinogenicity – Category 1A
Toxic to Reproduction 1B: Reproductive toxicity – Category 1B
Specific Target Organ Toxicity - Single Exposure 2: Specific target organ toxicity (single exposure) – Category 2
Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

· *** Data compared to the previous version altered.**