## SECTION 1: Identification

### 1.1. Identification

| | | |
|---|---|---|
| Product form | : | Substance |
| Trade name | : | Gasoline-Medium RVP |
| Chemical name | : | Gasoline |
| CAS-No. | : | 8006-61-9 |
| Product code | : | HF0003, HF0008, HF0019, HF0020, HF0030, HF0034, HF0040, HF0052, HF0053, HF0054. HF0065, HF0071, HF0072, HF0073, HF0075, HF0078, HF0094, HF0103, HF0111, HF0112, HF0168, HF0190, HF0261, HF0290, HF0295, HF0311, HF0325, HF0332, HF0355, HF0391, HF0410, HF0428, HF0437, HF0440, HF0485, HF00489, HF0495, HF0499, HF0501, HF0511, HF0515, HF0518, HF0521, HF0527, HF0531, HF0534, HF0535, HF0537, HF0538, HF0553, HF0555, HF0580, HF0584, HF0596, HF0607, HF0610, HF0611, HF0615, HF0616, HF0636, HF0637, HF0642, HF0643, HF0652, HF0656, HF0658, HF0661, HF0671, HF0672, HF0674, HF0677, HF0685, HF0686, HF0689, HF0691, HF0711, HF0729, HF0735, HF0739, HF0740, HF0741, HF0742. HF0743, HF0747, HF0752, HF0753, HF0761, HF0763, HF0768, HF0776, HF0785, HF0790, HF0794, HF0799, HF0800, HF0806, HF0808, HF0817, HF0828, HF0840, HF0851, HF0852, HF0872, HF0878, HF0884, HF0893, HF0907, HF0910, HF0914, HF0937, HF0946, HF0956, HF0966, HF0968, HF0972, HF0982, HF0986, HF0989, HF0998, HF1047, HF1093, HF1115, HF1127, HF1173, HF1202, HF1207, HF1211, HF1214, HF1216, HF1220, HF1226, HF2003, HF2004, HF2015, HF2018, HF2020, HF2024, HF2040, HF2050, HF2055, HF2056, HF2059, HF2061, HF2071, HF2072, HF2073, HF2074, HF2078, HF2087, HF2088, HF2091, HF2093, HF2099, HF2107, HF2109, HF2110, HF2116, HF2121, HF2124, HF2125, HF2127, HF2131, HF2139, HF2145, HF2148, HF2149, HF2154, HF2164, HF2171, HF2174, HF2198, HF2202, HF2208, HF2213, TR2280, BS0268 |
| Formula | : | Unspecified |
| Synonyms | : | Gasoline / Light gasoline / Motor spirit / Gasoline, natural (A complex combination of hydrocarbons separated from natural gas by processes such as refrigeration or absorption. It consists predominantly of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C4-8 and boiling in the range of approximately minus 20-120°C.) / Petroleum derived fuels / Gasoline, natural; Low boiling point naphtha [A complex combination of hydrocarbons separated from natural gas by processes such as refrigeration or absorption. It consists predominantly of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C4 through C8 and boiling in the range of approximately minus 20°C to 120°C (- 4°F to 248°F).] / Natural gasoline / Unleaded gasoline / Heating oil, light |

### 1.2. Recommended use and restrictions on use

| | | |
|---|---|---|
| Use of the substance/mixture | : | Fuel for engine development and testing |

### 1.3. Supplier

**Manufacturer**
Haltermann Solutions™
15600 West Hardy Rd.
Houston, TX, 77060
USA
T 1-800-969-2542 - F 281-457-1469

### 1.4. Emergency telephone number

| | | |
|---|---|---|
| Emergency number | : | 24 HR CHEMTREC: 1-800-424-9300; Emergency Assistance: 1-800-969-2542 (8 AM to 5 PM CDT) |

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS US classification**

| | | |
|---|---|---|
| Flammable liquids Category 1 | H224 | Extremely flammable liquid and vapor |
| Skin corrosion/irritation Category 2 | H315 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2 | H319 | Causes serious eye irritation |
| Germ cell mutagenicity Category 1B | H340 | May cause genetic defects |
| Carcinogenicity Category 1A | H350 | May cause cancer |
| Reproductive toxicity Category 2 | H361 | Suspected of damaging fertility or the unborn child |
| Specific target organ toxicity – Single exposure, Category 3, Narcosis | H336 | May cause drowsiness or dizziness |
| Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation | H335 | May cause respiratory irritation |
| Specific target organ toxicity (repeated exposure) Category 1 | H372 | Causes damage to organs through prolonged or repeated exposure |
| Aspiration hazard Category 1 | H304 | May be fatal if swallowed and enters airways |
| Hazardous to the aquatic environment – Acute Hazard Category 2 | H401 | Toxic to aquatic life |
| Hazardous to the aquatic environment – Chronic Hazard Category 1 | H410 | Very toxic to aquatic life with long lasting effects |

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) :
H224 - Extremely flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H361 - Suspected of damaging fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure
H401 - Toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
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, lighting, ventilating equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust, fume, gas, mist, spray, vapors.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.

P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER.
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/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.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a doctor, a POISON CENTER if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see Consult a doctor/medical service if you feel unwell on this label).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: 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 to extinguish.
P391 - Collect spillage.
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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Chemical name : Gasoline
CAS-No. : 8006-61-9

| Name | Product identifier | % |
|---|---|---|
| Gasoline | CAS-No.: 8006-61-9 | 100 |
| Petroleum Distillates | CAS-No.: 8002-05-9 | 0 – 100 |
| toluene | CAS-No.: 108-88-3 | 0 – 60 |
| cyclohexane | CAS-No.: 110-82-7 | 0 – 50 |
| n-hexane | CAS-No.: 110-54-3 | 0 – 50 |
| 2-Methylbutane | CAS-No.: 78-78-4 | 0 – 40 |
| isobutane | CAS-No.: 75-28-5 | 0 – 40 |
| Ethylbenzene | CAS-No.: 100-41-4 | 0 – 40 |
| butane | CAS-No.: 106-97-8 | 0 – 40 |
| xylene | CAS-No.: 1330-20-7 | 0 – 40 |
| 1,2,4-trimethylbenzene | CAS-No.: 95-63-6 | 0 – 30 |

| Name | Product identifier | % |
|---|---|---|
| Cumene | CAS-No.: 98-82-8 | 0 – 20 |
| naphthalene | CAS-No.: 91-20-3 | 0 – 20 |
| Methyl tert-butyl ether | CAS-No.: 1634-04-4 | 0 – 20 |
| benzene | CAS-No.: 71-43-2 | 0 – 10 |

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of 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. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

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 : Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung edema.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable liquid and vapor.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

#### 6.1.2. 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".

### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

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

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

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. 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. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| Gasoline (8006-61-9) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH OEL TWA [ppm] | 300 ppm |

| Gasoline (8006-61-9) | |
|---|---|
| ACGIH OEL STEL [ppm] | 500 ppm |

| Petroleum Distillates (8002-05-9) | |
|---|---|
| **USA - OSHA - Occupational Exposure Limits** | |
| OSHA PEL (TWA) [2] | 500 ppm |

| toluene (108-88-3) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Toluene |
| ACGIH OEL TWA [ppm] | 20 ppm |
| Remark (ACGIH) | Visual impair; female repro; pregnancy loss; A4; BEI |
| ACGIH chemical category | Not Classifiable as a Human Carcinogen |
| Regulatory reference | ACGIH 2022 |
| **USA - ACGIH - Biological Exposure Indices** | |
| Local name | TOLUENE |
| BEI (BLV) | 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek<br>0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift<br>0.3 mg/g Kreatinin Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background) |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Toluene |
| OSHA PEL (TWA) [2] | 200 ppm |
| OSHA PEL C [ppm] | 300 ppm |
| Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift | 500 ppm Peak (10 minutes) |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-2 |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 500 ppm |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 375 mg/m³ |
| NIOSH REL TWA [ppm] | 100 ppm |
| NIOSH REL (STEL) | 560 mg/m³ |
| NIOSH REL STEL [ppm] | 150 ppm |

| cyclohexane (110-82-7) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Cyclohexane |
| ACGIH OEL TWA [ppm] | 100 ppm |
| Remark (ACGIH) | CNS impair |
| Regulatory reference | ACGIH 2022 |

| cyclohexane (110-82-7) | |
|---|---|
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Cyclohexane |
| OSHA PEL (TWA) [1] | 1050 mg/m³ |
| OSHA PEL (TWA) [2] | 300 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 1300 ppm (10% LEL) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 1050 mg/m³ |
| NIOSH REL TWA [ppm] | 300 ppm |

| n-hexane (110-54-3) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | n-Hexane |
| ACGIH OEL TWA [ppm] | 50 ppm |
| Remark (ACGIH) | CNS impair; peripheral neuropathy; eye irr; Skin; BEI |
| ACGIH chemical category | Skin - potential significant contribution to overall exposure by the cutaneous route |
| Regulatory reference | ACGIH 2022 |
| **USA - ACGIH - Biological Exposure Indices** | |
| BEI (BLV) | 0.5 mg/l Parameter: 2,5-Hexanedione without hydrolysis - Medium: urine - Sampling time: end of shift |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | n-Hexane |
| OSHA PEL (TWA) [1] | 1800 mg/m³ |
| OSHA PEL (TWA) [2] | 500 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 1100 ppm (10% LEL) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 180 mg/m³ |
| NIOSH REL TWA [ppm] | 50 ppm |

| 2-Methylbutane (78-78-4) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Pentane, all isomers (1989) |
| ACGIH OEL TWA [ppm] | 1000 ppm |

| isobutane (75-28-5) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH OEL STEL [ppm] | 1000 ppm (explosion hazard (Butane, isomers) |

| isobutane (75-28-5) | |
|---|---|
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 1900 mg/m³ |
| NIOSH REL TWA [ppm] | 800 ppm |

| Ethylbenzene (100-41-4) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH chemical category | Confirmed Animal Carcinogen with Unknown Relevance to Humans |
| **USA - ACGIH - Biological Exposure Indices** | |
| BEI (BLV) | 0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid - Medium: urine - Sampling time: end of shift (nonspecific) |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Ethyl benzene |
| OSHA PEL (TWA) [1] | 435 mg/m³ |
| OSHA PEL (TWA) [2] | 100 ppm |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 800 ppm (10% LEL) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 435 mg/m³ |
| NIOSH REL TWA [ppm] | 100 ppm |
| NIOSH REL (STEL) | 545 mg/m³ |
| NIOSH REL STEL [ppm] | 125 ppm |

| butane (106-97-8) | |
|---|---|
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 1600 ppm (>10% LEL) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 1900 mg/m³ |
| NIOSH REL TWA [ppm] | 800 ppm |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH OEL TWA [ppm] | 25 ppm |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 125 mg/m³ |
| NIOSH REL TWA [ppm] | 25 ppm |

| Cumene (98-82-8) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Cumene |
| ACGIH OEL TWA [ppm] | 5 ppm |
| Remark (ACGIH) | TLV® Basis: URT adenoma; neurological eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) |

| Cumene (98-82-8) | |
|---|---|
| ACGIH chemical category | Confirmed Animal Carcinogen with Unknown Relevance to Humans |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Cumene |
| OSHA PEL (TWA) [1] | 245 mg/m³ |
| OSHA PEL (TWA) [2] | 50 ppm |
| Limit value category (OSHA) | prevent or reduce skin absorption |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 900 ppm (10% LEL) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 245 mg/m³ |
| NIOSH REL TWA [ppm] | 50 ppm |
| US-NIOSH chemical category | Potential for dermal absorption |

| naphthalene (91-20-3) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Naphthalene |
| ACGIH OEL TWA [ppm] | 10 ppm |
| Remark (ACGIH) | Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure) |
| ACGIH chemical category | Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route |
| Regulatory reference | ACGIH 2022 |
| **USA - ACGIH - Biological Exposure Indices** | |
| Local name | NAPHTHALENE |
| BEI (BLV) | Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific) |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Naphthalene |
| OSHA PEL (TWA) [1] | 50 mg/m³ |
| OSHA PEL (TWA) [2] | 10 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 250 ppm |

| naphthalene (91-20-3) | |
|---|---|
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL (TWA) | 50 mg/m³ |
| NIOSH REL TWA [ppm] | 10 ppm |
| NIOSH REL (STEL) | 75 mg/m³ |
| NIOSH REL STEL [ppm] | 15 ppm |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Methyl tert-butyl ether |
| ACGIH OEL TWA [ppm] | 50 ppm |
| Remark (ACGIH) | TLV® Basis: URT irr; kidney dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) |
| ACGIH chemical category | Confirmed Animal Carcinogen with Unknown Relevance to Humans |
| Regulatory reference | ACGIH 2022 |

| benzene (71-43-2) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Benzene |
| ACGIH OEL TWA [ppm] | 0.5 ppm |
| ACGIH OEL STEL [ppm] | 2.5 ppm |
| Remark (ACGIH) | Leukemia |
| ACGIH chemical category | Confirmed Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route |
| Regulatory reference | ACGIH 2022 |
| **USA - ACGIH - Biological Exposure Indices** | |
| Local name | BENZENE |
| BEI (BLV) | 25 µg/g Kreatinin Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: end of shift (background)<br>500 µg/g Kreatinin Parameter: t,t-Muconic acid - Medium: urine - Sampling time: end of shift (background) |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Benzene |
| OSHA PEL (TWA) [2] | 10 ppm<br>1 ppm |
| OSHA PEL (STEL) [2] | 5 ppm (see 29 CFR 1910.1028) |
| OSHA PEL C [ppm] | 25 ppm |
| Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift | 50 ppm Peak (10 minutes) |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-2 |

| benzene (71-43-2) | |
|---|---|
| **USA - IDLH - Occupational Exposure Limits** | |
| IDLH [ppm] | 500 ppm |
| **USA - NIOSH - Occupational Exposure Limits** | |
| NIOSH REL TWA [ppm] | 0.1 ppm |
| NIOSH REL STEL [ppm] | 1 ppm |

| xylene (1330-20-7) | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Xylene, mixed isomers (Dimethylbenzene) |
| ACGIH OEL TWA [ppm] | 20 ppm |
| Remark (ACGIH) | TLV® Basis: URT & eye irr; hematologic eff; ototoxycity (for mixtures containing p-xylene); CNS impair. Notations: OTO (for mixtures containing p-xylene); A4 (Not classifiable as a Human Carcinogen); BEI |
| ACGIH chemical category | Not Classifiable as a Human Carcinogen |
| Regulatory reference | ACGIH 2022 |
| **USA - ACGIH - Biological Exposure Indices** | |
| Local name | XYLENES (Technical or commercial grade) |
| BEI (BLV) | 1.5 g/g Kreatinin Parameter: Methylhippuric acids - Medium: urine - Sampling time: end of shift |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Xylenes (o-, m-, p-isomers) |
| OSHA PEL (TWA) [1] | 435 mg/m³ |
| OSHA PEL (TWA) [2] | 100 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

| **Hand protection:** |
|---|
| Protective gloves |

| **Eye protection:** |
|---|
| Safety glasses |

| **Skin and body protection:** |
|---|
| Wear suitable protective clothing |

| **Respiratory protection:** |
|---|
| Wear respiratory protection. |

**Personal protective equipment symbol(s):**

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Appearance | : | Colorless to amber colored liquid. |
| Color | : | clear amber |
| Odor | : | gasoline-like |
| Odor threshold | : | No data available |
| pH | : | No data available |
| Melting point | : | Not applicable |
| Freezing point | : | No data available |
| Boiling point | : | 31 – 199 °C |
| Flash point | : | -40 °C |
| Relative evaporation rate (butyl acetate=1) | : | No data available |
| Flammability (solid, gas) | : | Not applicable. |
| Vapor pressure | : | 46.9 – 65.5 kPa Reid Vapor Pressure |
| Relative vapor density at 20°C | : | No data available |
| Relative density | : | 53 – 61 °API Gravity |
| Solubility | : | No data available |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosion limits | : | No data available |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Extremely flammable liquid and vapor.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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.

| Gasoline (8006-61-9) | |
|---|---|
| LD50 oral rat | 14000 mg/kg |
| LC50 Inhalation - Rat | 300 g/m³ (Exposure time: 5 min) |
| ATE US (oral) | 14000 mg/kg body weight |
| ATE US (vapors) | 300 mg/l/4h |
| ATE US (dust, mist) | 300 mg/l/4h |

| Petroleum Distillates (8002-05-9) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |

| toluene (108-88-3) | |
|---|---|
| LD50 oral rat | 2600 mg/kg |
| LD50 dermal rabbit | 12000 mg/kg |
| LC50 Inhalation - Rat | 12.5 mg/l/4h |
| ATE US (oral) | 2600 mg/kg body weight |
| ATE US (dermal) | 12000 mg/kg body weight |
| ATE US (vapors) | 12.5 mg/l/4h |
| ATE US (dust, mist) | 12.5 mg/l/4h |

| cyclohexane (110-82-7) | |
|---|---|
| LD50 oral rat | 12705 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| LC50 Inhalation - Rat | > 32880 mg/m³ (Exposure time: 4 h) |
| ATE US (oral) | 12705 mg/kg body weight |

| n-hexane (110-54-3) | |
|---|---|
| LD50 oral rat | 25 g/kg |
| LD50 dermal rabbit | 3000 mg/kg |
| LC50 Inhalation - Rat | > 17.6 mg/l air (Equivalent or similar to OECD 403, 24 h, Rat, Male, Experimental value, Inhalation (vapours)) |

| n-hexane (110-54-3) | |
|---|---|
| ATE US (oral) | 25000 mg/kg body weight |
| ATE US (dermal) | 3000 mg/kg body weight |

| 2-Methylbutane (78-78-4) | |
|---|---|
| LD50 oral rat | > 2000 mg/kg body weight |
| LC50 Inhalation - Rat | 1000 mg/l (1 hr) |
| ATE US (vapors) | 1000 mg/l/4h |
| ATE US (dust, mist) | 1000 mg/l/4h |

| isobutane (75-28-5) | |
|---|---|
| LC50 Inhalation - Rat [ppm] | > 800000 ppm (Exposure time: 15 min) |

| Ethylbenzene (100-41-4) | |
|---|---|
| LD50 oral rat | 3500 mg/kg |
| LD50 dermal rabbit | 15400 mg/kg |
| LC50 Inhalation - Rat | 17.4 mg/l/4h |
| ATE US (oral) | 3500 mg/kg body weight |
| ATE US (dermal) | 15400 mg/kg body weight |
| ATE US (vapors) | 17.4 mg/l/4h |
| ATE US (dust, mist) | 17.4 mg/l/4h |

| butane (106-97-8) | |
|---|---|
| LC50 Inhalation - Rat | 658 g/m³ (Exposure time: 4 h) |
| ATE US (vapors) | 658 mg/l/4h |
| ATE US (dust, mist) | 658 mg/l/4h |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| LD50 oral rat | 3280 mg/kg |
| LD50 dermal rat | 3440 mg/kg (24 h, Rat, Male / female, Read-across, Dermal) |
| LD50 dermal rabbit | > 3160 mg/kg |
| LC50 Inhalation - Rat | 18 g/m³ (Exposure time: 4 h) |
| ATE US (oral) | 3280 mg/kg body weight |
| ATE US (dermal) | 3440 mg/kg body weight |
| ATE US (gases) | 4500 ppmV/4h |
| ATE US (vapors) | 18 mg/l/4h |
| ATE US (dust, mist) | 1.5 mg/l/4h |

| Cumene (98-82-8) | |
|---|---|
| LD50 oral rat | 2910 mg/kg body weight |
| LD50 dermal rabbit | 12300 µl/kg |
| LC50 Inhalation - Rat | 39 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s)) |
| ATE US (oral) | 2910 mg/kg body weight |

| Cumene (98-82-8) | |
|---|---|
| ATE US (dermal) | 10578 mg/kg body weight |
| ATE US (vapors) | 39 mg/l/4h |
| ATE US (dust, mist) | 39 mg/l/4h |

| naphthalene (91-20-3) | |
|---|---|
| LD50 oral rat | 1110 mg/kg |
| LD50 oral | 533 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 16000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s)) |
| LD50 dermal rabbit | > 2000 mg/kg body weight |
| LC50 Inhalation - Rat | > 0.34 mg/l (Exposure time: 1 h) |
| ATE US (oral) | 533 mg/kg body weight |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| LD50 oral rat | 2963 mg/kg |
| LD50 dermal rat | > 2000 mg/kg body weight (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), 14 day(s)) |
| ATE US (oral) | 2963 mg/kg body weight |
| ATE US (vapors) | 85 mg/l/4h |
| ATE US (dust, mist) | 85 mg/l/4h |

| benzene (71-43-2) | |
|---|---|
| LD50 oral rat | > 2000 mg/kg body weight |
| LD50 dermal rabbit | > 8200 mg/kg |
| LC50 Inhalation - Rat | 44.66 mg/l/4h |
| ATE US (vapors) | 44.66 mg/l/4h |
| ATE US (dust, mist) | 44.66 mg/l/4h |

| xylene (1330-20-7) | |
|---|---|
| LD50 oral rat | 3500 mg/kg |
| LD50 dermal rabbit | > 4350 mg/kg |
| LC50 Inhalation - Rat | 29.08 mg/l/4h |
| ATE US (oral) | 3500 mg/kg body weight |
| ATE US (gases) | 4500 ppmV/4h |
| ATE US (vapors) | 11 mg/l/4h |
| ATE US (dust, mist) | 1.5 mg/l/4h |

Skin corrosion/irritation : Causes skin irritation.

| toluene (108-88-3) | |
|---|---|
| pH | No data available in the literature |

| cyclohexane (110-82-7) | |
|---|---|
| pH | 7 (5.2E-3 %, 24 °C) |

| n-hexane (110-54-3) | |
|---|---|
| pH | 7 (0.001 %, 25 °C) |

| 2-Methylbutane (78-78-4) | |
|---|---|
| pH | No data available in the literature |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| pH | No data available in the literature |

| naphthalene (91-20-3) | |
|---|---|
| pH | No data available in the literature |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| pH | 7 (4.1 %, 20 °C) |

| benzene (71-43-2) | |
|---|---|
| pH | No data available in the literature |

| xylene (1330-20-7) | |
|---|---|
| pH | No data available in the literature |

Serious eye damage/irritation : Causes serious eye irritation.

| toluene (108-88-3) | |
|---|---|
| pH | No data available in the literature |

| cyclohexane (110-82-7) | |
|---|---|
| pH | 7 (5.2E-3 %, 24 °C) |

| n-hexane (110-54-3) | |
|---|---|
| pH | 7 (0.001 %, 25 °C) |

| 2-Methylbutane (78-78-4) | |
|---|---|
| pH | No data available in the literature |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| pH | No data available in the literature |

| naphthalene (91-20-3) | |
|---|---|
| pH | No data available in the literature |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| pH | 7 (4.1 %, 20 °C) |

| benzene (71-43-2) | |
|---|---|
| pH | No data available in the literature |

| xylene (1330-20-7) | |
|---|---|
| pH | No data available in the literature |

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

| Gasoline (8006-61-9) | |
|---|---|
| IARC group | 2B - Possibly carcinogenic to humans |

| Petroleum Distillates (8002-05-9) | |
|---|---|
| IARC group | 3 - Not classifiable |

| toluene (108-88-3) | |
|---|---|
| IARC group | 3 - Not classifiable |

| Ethylbenzene (100-41-4) | |
|---|---|
| IARC group | 2B - Possibly carcinogenic to humans |
| National Toxicology Program (NTP) Status | Evidence of Carcinogenicity |
| In OSHA Hazard Communication Carcinogen list | Yes |

| Cumene (98-82-8) | |
|---|---|
| IARC group | 2B - Possibly carcinogenic to humans |
| National Toxicology Program (NTP) Status | Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity |
| In OSHA Hazard Communication Carcinogen list | Yes |

| naphthalene (91-20-3) | |
|---|---|
| IARC group | 2B - Possibly carcinogenic to humans |
| National Toxicology Program (NTP) Status | Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity |
| In OSHA Hazard Communication Carcinogen list | Yes |

| benzene (71-43-2) | |
|---|---|
| IARC group | 1 - Carcinogenic to humans |
| National Toxicology Program (NTP) Status | Known Human Carcinogens, Evidence of Carcinogenicity |
| In OSHA Hazard Communication Carcinogen list | Yes |
| In OSHA Specifically Regulated Carcinogen list | Yes |

| xylene (1330-20-7) | |
|---|---|
| IARC group | 3 - Not classifiable |

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

| naphthalene (91-20-3) | |
|---|---|
| LOAEL (animal/female, F0/P) | 50 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study) |
| LOAEL (animal/female, F1) | 450 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study) |
| NOAEL (animal/female, F0/P) | 120 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study) |

STOT-single exposure : May cause drowsiness or dizziness. May cause respiratory irritation.

| Petroleum Distillates (8002-05-9) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

| toluene (108-88-3) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

| cyclohexane (110-82-7) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

| n-hexane (110-54-3) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

| 2-Methylbutane (78-78-4) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| STOT-single exposure | May cause respiratory irritation. |

| Cumene (98-82-8) | |
|---|---|
| STOT-single exposure | May cause respiratory irritation. |

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

| Petroleum Distillates (8002-05-9) | |
|---|---|
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

| toluene (108-88-3) | |
|---|---|
| LOAEL (oral,rat,90 days) | 1250 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (oral,rat,90 days) | 625 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEC (inhalation,rat,vapor,90 days) | 2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study) |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

| n-hexane (110-54-3) | |
|---|---|
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

| naphthalene (91-20-3) | |
|---|---|
| LOAEL (oral,rat,90 days) | 400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| LOAEC (inhalation,rat,vapor,90 days) | 0.011 mg/l air Animal: rat, Guideline: EPA OPP 82-4 (90-Day Inhalation Toxicity), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study) |
| NOAEL (dermal,rat/rabbit,90 days) | 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |

| benzene (71-43-2) | |
|---|---|
| STOT-repeated exposure | Causes damage to organs through prolonged or repeated exposure. |

| xylene (1330-20-7) | |
|---|---|
| LOAEL (oral,rat,90 days) | 150 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity) |

Aspiration hazard : May be fatal if swallowed and enters airways.

Viscosity, kinematic : No data available

| toluene (108-88-3) | |
|---|---|
| Viscosity, kinematic | No data available in the literature |

| cyclohexane (110-82-7) | |
|---|---|
| Viscosity, kinematic | 1.16 mm²/s (26 °C, Calculated) |

| n-hexane (110-54-3) | |
|---|---|
| Viscosity, kinematic | No data available in the literature |

| 2-Methylbutane (78-78-4) | |
|---|---|
| Viscosity, kinematic | 0.31 – 0.52 mm²/s (20 °C, ASTM D445: Capillary viscometer) |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| Viscosity, kinematic | 0.843 mm²/s (20 °C) |

| Cumene (98-82-8) | |
|---|---|
| Viscosity, kinematic | 0.74 mm²/s (38 °C) |

| naphthalene (91-20-3) | |
|---|---|
| Viscosity, kinematic | 1 mm²/s (80 °C, OECD 114: Viscosity of Liquids) |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| Viscosity, kinematic | 0.464 mm²/s (20 °C, OECD 114: Viscosity of Liquids) |

| benzene (71-43-2) | |
|---|---|
| Viscosity, kinematic | No data available in the literature |

| xylene (1330-20-7) | |
|---|---|
| Viscosity, kinematic | 0.74 mm²/s (20 °C) |

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung edema.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Ecology - air : TA-Luft Klasse 5.2.7.1.1/II.

| Gasoline (8006-61-9) | |
|---|---|
| LC50 - Fish [1] | 56 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss) |
| EC50 - Crustacea [1] | 7.6 mg/l (Exposure time: 48 h) |

| Petroleum Distillates (8002-05-9) | |
|---|---|
| LC50 - Fish [1] | 3 mg/l (Exposure time: 96 h - Species: Oncorhynchus Mykiss |
| EC50 - Crustacea [1] | < 0.26 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

| toluene (108-88-3) | |
|---|---|
| LC50 - Fish [1] | 15.22 – 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| LC50 - Fish [2] | 12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 - Crustacea [2] | 11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 72h - Algae [1] | 12.5 mg/l (Species: Pseudokirchneriella subcapitata [static]) |
| EC50 96h - Algae [1] | > 433 mg/l (Species: Pseudokirchneriella subcapitata) |
| LOEC (chronic) | 2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' |
| NOEC (chronic) | 0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' |
| NOEC chronic fish | 1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d' |

| cyclohexane (110-82-7) | |
|---|---|
| LC50 - Fish [1] | 3.96 – 5.18 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 0.9 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect) |
| LC50 - Fish [2] | 23.03 – 42.07 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 72h - Algae [1] | 9.317 mg/l (Equivalent or similar to OECD 201, Pseudokirchneriella subcapitata, Experimental value, Growth rate) |

| 2-Methylbutane (78-78-4) | |
|---|---|
| LC50 - Fish [1] | 3.1 mg/l (Exposure time: 96 h - Species: Oncorhynchus Mykiss) |
| EC50 - Crustacea [1] | 2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| ErC50 algae | 10.7 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Read-across, GLP) |

| Ethylbenzene (100-41-4) | |
|---|---|
| LC50 - Fish [1] | 11 – 18 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| EC50 - Crustacea [1] | 1.8 – 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 - Fish [2] | 4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static]) |
| EC50 72h - Algae [1] | 4.6 mg/l (Species: Pseudokirchneriella subcapitata) |
| EC50 72h - Algae [2] | 2.6 – 11.3 mg/l (Species: Pseudokirchneriella subcapitata [static]) |
| EC50 96h - Algae [1] | > 438 mg/l (Species: Pseudokirchneriella subcapitata) |
| EC50 96h - Algae [2] | 1.7 – 7.6 mg/l (Species: Pseudokirchneriella subcapitata [static]) |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| LC50 - Fish [1] | 7.19 – 8.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 96h - Algae [1] | 2.356 mg/l (ECOSAR, Algae, Fresh water, QSAR) |

| Cumene (98-82-8) | |
|---|---|
| LC50 - Fish [1] | 6.04 – 6.61 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |

| Cumene (98-82-8) | |
|---|---|
| EC50 - Crustacea [1] | 0.6 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 - Fish [2] | 4.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through]) |
| EC50 - Crustacea [2] | 7.9 – 14.1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| ErC50 algae | 2.01 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP) |

| naphthalene (91-20-3) | |
|---|---|
| LC50 - Fish [1] | 5.74 – 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 - Fish [2] | 1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through]) |
| EC50 - Crustacea [2] | 1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through]) |
| EC50 72h - Algae [1] | 0.4 mg/l (Skeletonema costatum, Literature study, Growth rate) |
| NOEC (chronic) | 0.59 mg/l Test organisms (species): Daphnia pulex Duration: '125 d' |
| NOEC chronic fish | ≈ 0.37 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d' |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| LC50 - Fish [1] | 672 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 542 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 - Fish [2] | 929 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 96h - Algae [1] | 184 mg/l (Species: Pseudokirchneriella subcapitata) |

| benzene (71-43-2) | |
|---|---|
| LC50 - Fish [1] | 10.7 – 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 8.76 – 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| LC50 - Fish [2] | 5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through]) |
| EC50 - Crustacea [2] | 10 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 72h - Algae [1] | 29 mg/l (Species: Pseudokirchneriella subcapitata) |
| ErC50 algae | 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |

| xylene (1330-20-7) | |
|---|---|
| LC50 - Fish [1] | 13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 - Crustacea [1] | 3.82 mg/l (Exposure time: 48 h - Species: water flea) |
| LC50 - Fish [2] | 2.661 – 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| EC50 - Crustacea [2] | 0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris) |
| ErC50 algae | 4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |
| NOEC chronic fish | > 1.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '56 d' |

## 12.2. Persistence and degradability

| toluene (108-88-3) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 2.15 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 2.52 g $O_2$/g substance |
| ThOD | 3.13 g $O_2$/g substance |
| BOD (% of ThOD) | 0.69 |

| cyclohexane (110-82-7) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.22 g $O_2$/g substance |
| ThOD | 3.425 g $O_2$/g substance |

| n-hexane (110-54-3) | |
|---|---|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| ThOD | 3.52 g $O_2$/g substance |

| 2-Methylbutane (78-78-4) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| ThOD | 3.55 g $O_2$/g substance |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in water. |
| Chemical oxygen demand (COD) | 0.44 g $O_2$/g substance |

| Cumene (98-82-8) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 1.28 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 2.42 g $O_2$/g substance |
| ThOD | 3.2 g $O_2$/g substance |

| naphthalene (91-20-3) | |
|---|---|
| Persistence and degradability | Not established. |
| Biochemical oxygen demand (BOD) | 0 g $O_2$/g substance |

| naphthalene (91-20-3) | |
|---|---|
| Chemical oxygen demand (COD) | 0.22 g $O_2$/g substance |
| ThOD | 2.99 g $O_2$/g substance |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in the soil. Not readily biodegradable in water. |

| benzene (71-43-2) | |
|---|---|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 2.18 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 2.15 g $O_2$/g substance |
| ThOD | 3.1 g $O_2$/g substance |

| xylene (1330-20-7) | |
|---|---|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |

### 12.3. Bioaccumulative potential

| Petroleum Distillates (8002-05-9) | |
|---|---|
| Bioaccumulative potential | Not bioaccumulative. |

| toluene (108-88-3) | |
|---|---|
| BCF - Fish [1] | 90 (72 h, Leuciscus idus, Static system, Fresh water, Experimental value) |
| Partition coefficient n-octanol/water (Log Pow) | 2.7 |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| cyclohexane (110-82-7) | |
|---|---|
| BCF - Fish [1] | 167 l/kg (Pimephales promelas, QSAR, Fresh weight) |
| Partition coefficient n-octanol/water (Log Pow) | 3.44 |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| n-hexane (110-54-3) | |
|---|---|
| BCF - Fish [1] | 501.187 (Pimephales promelas, Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 4 (Experimental value, Equivalent or similar to OECD 107, 20 °C) |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5). |

| 2-Methylbutane (78-78-4) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 3.2 – 3.3 |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5). |

| isobutane (75-28-5) | |
|---|---|
| BCF - Fish [1] | 1.57 – 1.97 |
| Partition coefficient n-octanol/water (Log Pow) | 2.88 (at 20 °C) |

| Ethylbenzene (100-41-4) | |
|---|---|
| BCF - Fish [1] | 15 |
| Partition coefficient n-octanol/water (Log Pow) | 3.2 |

| butane (106-97-8) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.89 |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| BCF - Fish [1] | 243 (Pimephales promelas, QSAR) |
| Partition coefficient n-octanol/water (Log Pow) | 3.63 |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Cumene (98-82-8) | |
|---|---|
| BCF - Other aquatic organisms [1] | 94.69 l/kg (BCFBAF v3.00, Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 3.7 |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| naphthalene (91-20-3) | |
|---|---|
| BCF - Fish [1] | 30 – 430 |
| Partition coefficient n-octanol/water (Log Pow) | 3.6 |
| Bioaccumulative potential | Not established. |

| Methyl tert-butyl ether (1634-04-4) | |
|---|---|
| BCF - Fish [1] | (no bioaccumulation expected) |
| Partition coefficient n-octanol/water (Log Pow) | 1.06 (at 23 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| benzene (71-43-2) | |
|---|---|
| BCF - Fish [1] | 3.5 – 4.4 |
| Partition coefficient n-octanol/water (Log Pow) | 2.1 |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| xylene (1330-20-7) | |
|---|---|
| BCF - Fish [1] | 0.6 – 15 |
| Partition coefficient n-octanol/water (Log Pow) | 2.77 – 3.15 |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

## 12.4. Mobility in soil

| toluene (108-88-3) | |
|---|---|
| Surface tension | 27.73 mN/m (25 °C, 0.05 %) |
| Ecology - soil | Low potential for adsorption in soil. |

| cyclohexane (110-82-7) | |
|---|---|
| Surface tension | No data available in the literature |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.89 (log Koc, Calculated value) |
| Ecology - soil | Low potential for adsorption in soil. |

| n-hexane (110-54-3) | |
|---|---|
| Surface tension | 17.89 mN/m (25 °C, 1 g/l) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.34 (log Koc, QSAR) |
| Ecology - soil | Low potential for mobility in soil. |

| 2-Methylbutane (78-78-4) | |
|---|---|
| Surface tension | 15.49 mN/m (25 °C, 100 vol %) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.9 (log Koc, Read-across) |
| Ecology - soil | Low potential for adsorption in soil. |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| Surface tension | No data available in the literature |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.04 (log Koc, Calculated value) |
| Ecology - soil | Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation. |

| Cumene (98-82-8) | |
|---|---|
| Surface tension | 28.2 mN/m (20 °C) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.946 (log Koc, Calculated value) |
| Ecology - soil | Low potential for adsorption in soil. |

| naphthalene (91-20-3) | |
|---|---|
| Surface tension | No data available in the literature |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.864 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil | Low potential for adsorption 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. |

| benzene (71-43-2) | |
|---|---|
| Surface tension | 29 mN/m (20 °C) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.848 (log Koc, SRC PCKOCWIN v2.0, QSAR) |
| Ecology - soil | Highly mobile in soil. |

| xylene (1330-20-7) | |
|---|---|
| Surface tension | 28.01 – 29.76 mN/m (25 °C) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.73 (log Koc, Equivalent or similar to OECD 121, Read-across) |

| xylene (1330-20-7) | |
|---|---|
| Ecology - soil | Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation. |

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

### 14.1. UN number

DOT NA No : UN1203

UN-No. (IMDG) : 1203

UN-No. (IATA) : 1203

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Gasoline

Proper Shipping Name (IMDG) : GASOLINE

Proper Shipping Name (IATA) : Gasoline

Transport document description (DOT) : UN1203 Gasoline, 3, II

Transport document description (IMDG) : UN 1203 GASOLINE, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

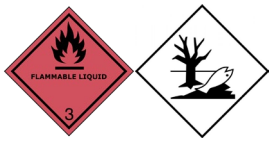
Transport document description (IATA) : UN 1203 Gasoline, 3, II, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

**DOT**

Transport hazard class(es) (DOT) : 3

Hazard labels (DOT) : 3




**IMDG**

Transport hazard class(es) (IMDG) : 3

Hazard labels (IMDG) : 3


**IATA**

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3


## 14.4. Packing group

Packing group (DOT) : II

Packing group (IMDG) : II

Packing group (IATA) : II

## 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available.

## 14.6. Special precautions for user

**DOT**

UN-No.(DOT) : UN1203

DOT Special Provisions (49 CFR 172.102) : 144 - If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter.
177 - Gasoline, or, ethanol and gasoline mixtures, for use in internal combustion engines (e.g, in automobiles, stationary engines and other engines) must be assigned to Packing Group II regardless of variations in volatility.
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.
B33 - MC 300, MC 301, MC 302, MC 303, MC 305, MC 306, and DOT 406 cargo tanks equipped with a 1 psig normal vent used to transport gasoline must conform to Table I of this Special Provision. Based on the volatility class determined by using ASTM D 439 and the Reid vapor pressure (RVP) of the particular gasoline, the maximum lading pressure and maximum ambient temperature permitted during the loading of gasoline may not exceed that listed in Table I.
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)

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 | : | E - 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, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded. |

**IMDG**

| | | |
|---|---|---|
| Special provision (IMDG) | : | 243 |
| 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-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER |
| Stowage category (IMDG) | : | E |
| Properties and observations (IMDG) | : | 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 |
| Special provision (IATA) | : | A100 |
| ERG code (IATA) | : | 3H |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

| Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. | | |
|---|---|---|
| Toluene | CAS-No. 108-88-3 | 0 – 60% |
| Cyclohexane | CAS-No. 110-82-7 | 0 – 50% |
| Hexane | CAS-No. 110-54-3 | 0 – 50% |
| Ethylbenzene | CAS-No. 100-41-4 | 0 – 40% |
| Benzene, 1,2,4-trimethyl- | CAS-No. 95-63-6 | 0 – 30% |
| Isopropylbenzene | CAS-No. 98-82-8 | 0 – 20% |
| Naphthalene | CAS-No. 91-20-3 | 0 – 20% |

| | | |
|---|---|---|
| Methyl tert-butyl ether | CAS-No. 1634-04-4 | 0 – 20% |
| Benzene | CAS-No. 71-43-2 | 0 – 10% |
| Xylenes (o-, m-, p- isomers) | CAS-No. 1330-20-7 | 0 – 40% |

| **toluene (108-88-3)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 1000 lb |

| **cyclohexane (110-82-7)** | |
|---|---|
| CERCLA RQ | 1000 lb |

| **n-hexane (110-54-3)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 5000 lb |

| **Ethylbenzene (100-41-4)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 1000 lb |

| **Cumene (98-82-8)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 5000 lb |

| **naphthalene (91-20-3)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 100 lb |

| **Methyl tert-butyl ether (1634-04-4)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 1000 lb |

| **benzene (71-43-2)** | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 10 lb |

| xylene (1330-20-7) | |
|---|---|
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 100 lb |

## 15.2. International regulations

### CANADA

**Gasoline (8006-61-9)**

Listed on the Canadian DSL (Domestic Substances List)

**Petroleum Distillates (8002-05-9)**

Listed on the Canadian DSL (Domestic Substances List)

**toluene (108-88-3)**

Listed on the Canadian DSL (Domestic Substances List)

**cyclohexane (110-82-7)**

Listed on the Canadian DSL (Domestic Substances List)

**n-hexane (110-54-3)**

Listed on the Canadian DSL (Domestic Substances List)

**2-Methylbutane (78-78-4)**

Listed on the Canadian DSL (Domestic Substances List)

**isobutane (75-28-5)**

Listed on the Canadian DSL (Domestic Substances List)

**Ethylbenzene (100-41-4)**

Listed on the Canadian DSL (Domestic Substances List)

**butane (106-97-8)**

Listed on the Canadian DSL (Domestic Substances List)

**1,2,4-trimethylbenzene (95-63-6)**

Listed on the Canadian DSL (Domestic Substances List)

**Cumene (98-82-8)**

Listed on the Canadian DSL (Domestic Substances List)

| naphthalene (91-20-3) | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) | |
| Toxic Substance (CEPA – Schedule I) | Yes |

| Methyl tert-butyl ether (1634-04-4) |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| benzene (71-43-2) | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) | |
| Toxic Substance (CEPA – Schedule I) | Yes |

| xylene (1330-20-7) |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

**EU-Regulations**

| Gasoline (8006-61-9) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| Petroleum Distillates (8002-05-9) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| toluene (108-88-3) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| cyclohexane (110-82-7) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| n-hexane (110-54-3) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| 2-Methylbutane (78-78-4) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| isobutane (75-28-5) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| Ethylbenzene (100-41-4) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| butane (106-97-8) |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

**1,2,4-trimethylbenzene (95-63-6)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**Cumene (98-82-8)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**naphthalene (91-20-3)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**Methyl tert-butyl ether (1634-04-4)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**benzene (71-43-2)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**xylene (1330-20-7)**

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

**Gasoline (8006-61-9)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

**Petroleum Distillates (8002-05-9)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

**toluene (108-88-3)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

**cyclohexane (110-82-7)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

**n-hexane (110-54-3)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

**2-Methylbutane (78-78-4)**

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### isobutane (75-28-5)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### Ethylbenzene (100-41-4)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### butane (106-97-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### 1,2,4-trimethylbenzene (95-63-6)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### Cumene (98-82-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### naphthalene (91-20-3)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### Methyl tert-butyl ether (1634-04-4)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

### benzene (71-43-2)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

| xylene (1330-20-7) |
|---|
| Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)<br>Listed on the Japanese ENCS (Existing  New Chemical Substances) inventory<br>Listed on KECL/KECI (Korean Existing Chemicals Inventory)<br>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)<br>Japanese Poisonous and Deleterious Substances Control Law<br>Japanese Pollutant Release and Transfer Register Law (PRTR Law)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on the Japanese ISHL (Industrial Safety and Health Law)<br>Listed on INSQ (Mexican National Inventory of Chemical Substances)<br>Listed on the TCSI (Taiwan Chemical Substance Inventory)<br>Listed on the NCI (Vietnam - National Chemical Inventory) |

## 15.3. US State regulations

| Gasoline (8006-61-9) | |
|---|---|
| State or local regulations | U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Massachusetts - Right To Know List |

**WARNING:** This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| Component | State or local regulations |
|---|---|
| Petroleum Distillates(8002-05-9) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List |
| toluene(108-88-3) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| cyclohexane(110-82-7) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| n-hexane(110-54-3) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations |
| 2-Methylbutane(78-78-4) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List |
| isobutane(75-28-5) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List |
| Ethylbenzene(100-41-4) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |

| Component | State or local regulations |
|---|---|
| butane(106-97-8) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List |
| 1,2,4-trimethylbenzene(95-63-6) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| Cumene(98-82-8) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| naphthalene(91-20-3) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| Methyl tert-butyl ether(1634-04-4) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| benzene(71-43-2) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances; U.S. - Idaho - Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| xylene(1330-20-7) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs); U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 12/12/2022

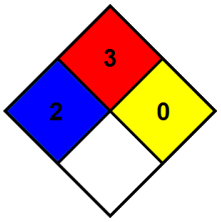
| Full text of H-phrases | |
|---|---|
| H224 | Extremely flammable liquid and vapor |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |
| H340 | May cause genetic defects |
| H350 | May cause cancer |
| H361 | Suspected of damaging fertility or the unborn child |

| Full text of H-phrases | |
|---|---|
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H401 | Toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.




| Indication of changes: | | | |
|---|---|---|---|
| **Section** | **Changed item** | **Change** | **Comments** |
| | Supersedes | Modified | No additional information available |
| | Revision date | Modified | No additional information available |

Safety Data Sheet (SDS), USA