# Safety Data Sheet



This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

| | | | |
|---|---|---|---|
| **Document group:** | 36-1997-0 | **Version number:** | 2.00 |
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## SECTION 1: Identification

**1.1. Product identifier**
3M™ High Power Brake Cleaner, 08880

**1.2. Recommended use and restrictions on use**

**Recommended use**
Automotive., Brake Cleaner

**1.3. Supplier's details**
**Address:** 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
**Telephone:** +65 6450 8888
**Website:** www.3m.com.sg

**1.4. Emergency telephone number**
+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

## SECTION 2: Hazard identification

**2.1. Classification of the substance or mixture**
Aerosol: Category 1.
Acute Toxicity (oral): Category 4.
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Carcinogenicity: Category 1B.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Aspiration Hazard: Category 1.

**2.2. Label elements**
**SIGNAL WORD**
DANGER!

**Symbols**
Flame |Exclamation mark |Health Hazard |

**Pictograms**

**HAZARD STATEMENTS**

| | |
|---|---|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurized container: may burst if heated. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H350 | May cause cancer. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H336 | May cause drowsiness or dizziness. |
| H304 | May be fatal if swallowed and enters airways. |
| H370 | Causes damage to organs: sensory organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure: nervous system. |
| H373 | May cause damage to organs through prolonged or repeated exposure: sensory organs. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Do not pierce or burn, even after use. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280F | Wear respiratory protection. |

**Response:**

| | |
|---|---|
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| 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. |
| P321 | Specific treatment (see Notes to Physician on this label). |
| P331 | Do NOT induce vomiting. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |

**Storage:**

| | |
|---|---|
| P405 | Store locked up. |
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. |

**Disposal:**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |

**2.3. Other hazards**

None known.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | CAS Nbr | % by Wt |
|---|---|---|
| Heptane, branched, cyclic and linear | 426260-76-6 | 50 - 60 |
| 2-Methylhexane | 591-76-4 | 15 - 30* |
| 3-Methylhexane | 589-34-4 | 15 - 30* |
| Xylene | 1330-20-7 | 15 - 30 |
| Ethylbenzene | 100-41-4 | 1 - 11 |
| Methanol | 67-56-1 | < 10 |
| Carbon dioxide | 124-38-9 | 1 - 5 |
| Heptane | 142-82-5 | 0.5 - 2.5* |
| Dimethylcyclopentane | 2532-58-3 | 0.5 - 1.5* |
| Toluene | 108-88-3 | < 0.3 |
| Cumene | 98-82-8 | < 0.3 |

*These components are contained as a part of Heptane, branched, cyclic and linear(426260-76-6)

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin contact**
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye contact**
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If swallowed**
Do not induce vomiting. Get immediate medical attention.

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

Aspiration pneumonitis (coughing, gasping, choking, burning of the mouth, and difficulty breathing). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

**4.3. Indication of any immediate medical attention and special treatment required**
UN1133

## SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**
Use a fire fighting agent suitable for the surrounding fire.

**5.2. Special hazards arising from the substance or mixture**
Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Formaldehyde | During combustion. |
| Carbon monoxide. | During combustion. |
| Carbon dioxide. | During combustion. |
| Toxic vapour, gas, particulate. | During combustion. |

**5.3. Special protective actions for fire-fighters**
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**
For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

**6.3. Methods and material for containment and cleaning up**
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire-extinguishing foam. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

**7.2. Conditions for safe storage including any incompatibilities**
Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidising agents.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**Occupational exposure limits**
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available

for the component.

| Ingredient | CAS Nbr | Agency | Limit type | Additional comments |
|---|---|---|---|---|
| Ethylbenzene | 100-41-4 | ACGIH | TWA:20 ppm | A3: Confirmed animal carcin., Ototoxicant |
| Ethylbenzene | 100-41-4 | Singapore PELs | TWA(8 hours):434 mg/m3(100 ppm);STEL(15 minutes):543 mg/m3(125 ppm) | |
| Toluene | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin, Ototoxicant |
| Toluene | 108-88-3 | Singapore PELs | TWA(8 hours):188 mg/m3(50 ppm) | |
| Carbon dioxide | 124-38-9 | ACGIH | TWA:5000 ppm;STEL:30000 ppm | |
| Carbon dioxide | 124-38-9 | Singapore PELs | TWA(8 hours):9000 mg/m3(5000 ppm);STEL(15 minutes):54000 mg/m3(30000 ppm) | |
| Xylene | 1330-20-7 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin |
| Xylene | 1330-20-7 | Singapore PELs | TWA(8 hours):434 mg/m3(100 ppm);STEL(15 minutes):651 mg/m3(150 ppm) | |
| Heptane | 142-82-5 | ACGIH | TWA:400 ppm;STEL:500 ppm | |
| Heptane | 142-82-5 | Singapore PELs | TWA(8 hours):1640 mg/m3(400 ppm);STEL(15 minutes):2050 mg/m3(500 ppm) | |
| 3-Methylhexane | 589-34-4 | ACGIH | TWA:400 ppm;STEL:500 ppm | |
| Heptane, all isomers | 589-34-4 | Singapore PELs | TWA(8 hours):1640 mg/m3(400 ppm);STEL(15 minutes):2050 mg/m3(500 ppm) | |
| 2-Methylhexane | 591-76-4 | ACGIH | TWA:400 ppm;STEL:500 ppm | |
| Heptane, all isomers | 591-76-4 | Singapore PELs | TWA(8 hours):1640 mg/m3(400 ppm);STEL(15 minutes):2050 mg/m3(500 ppm) | |
| Methanol | 67-56-1 | ACGIH | TWA:200 ppm;STEL:250 ppm | Danger of cutaneous absorption |
| Methanol | 67-56-1 | Singapore PELs | TWA(8 hours):262 mg/m3(200 ppm);STEL(15 minutes):328 mg/m3(250 ppm) | |
| Cumene | 98-82-8 | ACGIH | TWA:5 ppm | A3: Confirmed animal carcin. |
| Cumene | 98-82-8 | Singapore PELs | TWA(8 hours):246 mg/m3(50 ppm) | |

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect vented goggles.

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **Physical state** | Liquid. |
| **Specific Physical Form:** | Aerosol |
| **Color** | Colorless |
| **Odor** | Solvent |
| **Odour threshold** | *No data available.* |
| **pH** | *Not applicable.* |
| **Melting point/Freezing point** | *No data available.* |
| **Boiling point/Initial boiling point/Boiling range** | *No data available.* |
| **Flash point** | >=-9.4 ºC [*Test Method:*Closed Cup] |
| **Evaporation rate** | *No data available.* |
| **Flammability** | Flammable Aerosol: Category 1. |
| **Flammable Limits(LEL)** | *No data available.* |
| **Flammable Limits(UEL)** | *No data available.* |
| **Vapour pressure** | 275,790.3 Pa [@ 21.1 ºC ] |
| **Vapor Density and/or Relative Vapor Density** | >=1 [*Ref Std:*AIR=1] |
| **Density** | 0.8 kg/l |
| **Relative density** | 0.78 [*Ref Std:*WATER=1] |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |

| | |
|---|---|
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **Kinematic Viscosity** | *No data available.* |
| **Volatile organic compounds (VOC)** | 749 g/l [*Test Method:*calculated SCAQMD rule 443.1] |
| **Volatile organic compounds (VOC)** | 96 % weight [*Test Method:*calculated per CARB title 2] |
| **Percent volatile** | 96 % weight |
| **VOC less H2O & exempt solvents** | 749 g/l [*Test Method:*calculated SCAQMD rule 443.1] |

| | |
|---|---|
| **Particle Characteristics** | *Not applicable.* |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

**10.2 Chemical stability**
Stable.

**10.3 Possibility of hazardous reactions**
Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**
Heat.
Sparks and/or flames.

**10.5 Incompatible materials**
Strong acids.
Strong oxidising agents.

**10.6 Hazardous decomposition products**

| **Substance** | **Condition** |
|---|---|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.**

**11.1 Information on Toxicological effects**

**Signs and Symptoms of Exposure**

**Based on test data and/or information on the components, this material may produce the following health effects:**

**Inhalation**
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

**Skin contact**

May be harmful in contact with skin.
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. May cause additional health effects (see below).

**Eye contact**
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion**
Harmful if swallowed.
Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. May cause blindness.

**Prolonged or repeated exposure may cause target organ effects:**
Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

**Reproductive/Developmental Toxicity:**
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**
Contains a chemical or chemicals which can cause cancer.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Dermal | | No data available; calculated ATE >2,000 - =5,000 mg/kg |
| Overall product | Inhalation-Vapor(4 hr) | | No data available; calculated ATE >20 - =50 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >300 - =2,000 mg/kg |
| Heptane, branched, cyclic and linear | Dermal | Rabbit | LD50 > 2,920 mg/kg |
| Heptane, branched, cyclic and linear | Inhalation-Vapor (4 hours) | Rat | LC50 > 23.3 mg/l |
| Heptane, branched, cyclic and linear | Ingestion | Rat | LD50 > 5,840 mg/kg |
| 3-Methylhexane | Dermal | Rabbit | LD50 3,000 mg/kg |
| 3-Methylhexane | Inhalation-Vapor (4 hours) | Rat | LC50 > 80 mg/l |
| 3-Methylhexane | Ingestion | Rat | LD50 17,000 mg/kg |
| Xylene | Dermal | Rabbit | LD50 > 4,200 mg/kg |
| Xylene | Inhalation-Vapor (4 hours) | Rat | LC50 29 mg/l |
| Xylene | Ingestion | Rat | LD50 3,523 mg/kg |
| 2-Methylhexane | Dermal | Rabbit | LD50 3,000 mg/kg |
| 2-Methylhexane | Inhalation- | Rat | LC50 > 80 mg/l |

| | | | |
|---|---|---|---|
| | Vapor (4 hours) | | |
| 2-Methylhexane | Ingestion | Rat | LD50 17,000 mg/kg |
| Methanol | Dermal | | LD50 estimated to be 1,000 - 2,000 mg/kg |
| Methanol | Inhalation-Vapor | | LC50 estimated to be 10 - 20 mg/l |
| Methanol | Ingestion | | LD50 estimated to be 50 - 300 mg/kg |
| Ethylbenzene | Dermal | Rabbit | LD50 15,433 mg/kg |
| Ethylbenzene | Inhalation-Vapor (4 hours) | Rat | LC50 17.4 mg/l |
| Ethylbenzene | Ingestion | Rat | LD50 4,769 mg/kg |
| Carbon dioxide | Inhalation-Gas (4 hours) | Rat | LC50 > 53,000 ppm |
| Heptane | Dermal | Rabbit | LD50 3,000 mg/kg |
| Heptane | Inhalation-Vapor (4 hours) | Rat | LC50 103 mg/l |
| Heptane | Ingestion | Rat | LD50 > 15,000 mg/kg |
| Dimethylcyclopentane | Inhalation-Vapor (4 hours) | Rat | LC50 > 25.3 mg/l |
| Dimethylcyclopentane | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Dimethylcyclopentane | Dermal | similar health hazards | LD50 estimated to be > 5,000 mg/kg |
| Toluene | Dermal | Rat | LD50 12,000 mg/kg |
| Toluene | Inhalation-Vapor (4 hours) | Rat | LC50 30 mg/l |
| Toluene | Ingestion | Rat | LD50 5,550 mg/kg |
| Cumene | Dermal | Rabbit | LD50 > 3,160 mg/kg |
| Cumene | Inhalation-Vapor (4 hours) | Rat | LC50 39.4 mg/l |
| Cumene | Ingestion | Rat | LD50 1,400 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Heptane, branched, cyclic and linear | Rabbit | Irritant |
| 3-Methylhexane | Rabbit | Minimal irritation |
| Xylene | Rabbit | Mild irritant |
| 2-Methylhexane | Rabbit | Minimal irritation |
| Methanol | Rabbit | Mild irritant |
| Ethylbenzene | Rabbit | Mild irritant |
| Heptane | Human | Mild irritant |
| Dimethylcyclopentane | Rabbit | No significant irritation |
| Toluene | Rabbit | Irritant |
| Cumene | Rabbit | Minimal irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Heptane, branched, cyclic and linear | Rabbit | Mild irritant |
| 3-Methylhexane | Rabbit | No significant irritation |
| Xylene | Rabbit | Mild irritant |
| 2-Methylhexane | Rabbit | No significant irritation |
| Methanol | Rabbit | Moderate irritant |
| Ethylbenzene | Rabbit | Moderate irritant |
| Heptane | Professional | Moderate irritant |

| | | |
|---|---|---|
| | judgement | |
| Dimethylcyclopentane | Rabbit | Mild irritant |
| Toluene | Rabbit | Moderate irritant |
| Cumene | Rabbit | Mild irritant |

**Sensitization:**

**Skin Sensitisation**

| Name | Species | Value |
|---|---|---|
| Heptane, branched, cyclic and linear | Guinea pig | Not classified |
| Methanol | Guinea pig | Not classified |
| Ethylbenzene | Human | Not classified |
| Dimethylcyclopentane | similar compounds | Not classified |
| Toluene | Guinea pig | Not classified |
| Cumene | Guinea pig | Not classified |

**Respiratory Sensitisation**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

| Name | Route | Value |
|---|---|---|
| Heptane, branched, cyclic and linear | In Vitro | Not mutagenic |
| Xylene | In Vitro | Not mutagenic |
| Xylene | In vivo | Not mutagenic |
| Methanol | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Methanol | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Ethylbenzene | In vivo | Not mutagenic |
| Ethylbenzene | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Heptane | In Vitro | Not mutagenic |
| Dimethylcyclopentane | In vivo | Not mutagenic |
| Dimethylcyclopentane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Toluene | In Vitro | Not mutagenic |
| Toluene | In vivo | Not mutagenic |
| Cumene | In Vitro | Not mutagenic |
| Cumene | In vivo | Not mutagenic |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Xylene | Dermal | Rat | Not carcinogenic |
| Xylene | Ingestion | Multiple animal species | Not carcinogenic |
| Xylene | Inhalation | Human | Some positive data exist, but the data are not sufficient for classification |
| Methanol | Inhalation | Multiple animal species | Not carcinogenic |
| Ethylbenzene | Inhalation | Multiple animal species | Carcinogenic. |

| | | | |
|---|---|---|---|
| Toluene | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Toluene | Ingestion | Rat | Some positive data exist, but the data are not sufficient for classification |
| Toluene | Inhalation | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Cumene | Inhalation | Multiple animal species | Carcinogenic. |

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | Not specified. | Not classified for female reproduction | Rat | NOAEL Not available | 2 generation |
| Heptane, branched, cyclic and linear | Not specified. | Not classified for male reproduction | Rat | NOAEL Not available | 2 generation |
| Heptane, branched, cyclic and linear | Not specified. | Not classified for development | Rat | NOAEL Not available | 2 generation |
| Xylene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| Xylene | Ingestion | Not classified for development | Mouse | NOAEL Not available | during organogenesis |
| Xylene | Inhalation | Not classified for development | Multiple animal species | NOAEL Not available | during gestation |
| Methanol | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,600 mg/kg/day | 21 days |
| Methanol | Ingestion | Toxic to development | Mouse | LOAEL 4,000 mg/kg/day | during organogenesis |
| Methanol | Inhalation | Toxic to development | Mouse | NOAEL 1.3 mg/l | during organogenesis |
| Ethylbenzene | Inhalation | Not classified for development | Rat | NOAEL 4.3 mg/l | premating & during gestation |
| Carbon dioxide | Inhalation | Not classified for male reproduction | Mouse | LOAEL 350,000 ppm | not available |
| Carbon dioxide | Inhalation | Not classified for development | Rat | LOAEL 60,000 ppm | 24 hours |
| Toluene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | Not classified for male reproduction | Rat | NOAEL 2.3 mg/l | 1 generation |
| Toluene | Ingestion | Toxic to development | Rat | LOAEL 520 mg/kg/day | during gestation |
| Toluene | Inhalation | Toxic to development | Human | NOAEL Not available | poisoning and/or abuse |
| Cumene | Inhalation | Not classified for development | Rabbit | NOAEL 11.3 mg/l | during organogenesis |

### Lactation

| Name | Route | Species | Value |
|---|---|---|---|
| Xylene | Ingestion | Mouse | Not classified for effects on or via lactation |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| 3-Methylhexane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL 4 mg/l | 4 hours |
| 3-Methylhexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Not available | NOAEL Not available | not available |
| 3-Methylhexane | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Not available | NOAEL Not available | |
| Xylene | Inhalation | auditory system | Causes damage to organs | Rat | LOAEL 6.3 mg/l | 8 hours |
| Xylene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Xylene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Xylene | Inhalation | eyes | Not classified | Rat | NOAEL 3.5 mg/l | not available |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | eyes | Not classified | Rat | NOAEL 250 mg/kg | not applicable |
| 2-Methylhexane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL 4 mg/l | 4 hours |
| 2-Methylhexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Not available | NOAEL Not available | not available |
| 2-Methylhexane | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Not available | NOAEL Not available | |
| Methanol | Inhalation | blindness | Causes damage to organs | Human | NOAEL Not available | occupational exposure |
| Methanol | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | not available |
| Methanol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL Not available | 6 hours |
| Methanol | Ingestion | blindness | Causes damage to organs | Human | NOAEL Not available | poisoning and/or abuse |
| Methanol | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | poisoning and/or abuse |
| Ethylbenzene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Ethylbenzene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human and animal | NOAEL Not available | |
| Heptane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Heptane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Heptane | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Dimethylcyclopentane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL Not available | |
| Dimethylcyclopentane | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL Not available | |
| Toluene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Toluene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Toluene | Inhalation | immune system | Not classified | Mouse | NOAEL | 3 hours |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 0.004 mg/l | |
| Toluene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | poisoning and/or abuse |
| Cumene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |
| Cumene | Inhalation | respiratory irritation | May cause respiratory irritation | Human | LOAEL 0.2 mg/l | occupational exposure |
| Cumene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| Xylene | Inhalation | nervous system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.4 mg/l | 4 weeks |
| Xylene | Inhalation | auditory system | May cause damage to organs though prolonged or repeated exposure | Rat | LOAEL 7.8 mg/l | 5 days |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Inhalation | heart \| endocrine system \| gastrointestinal tract \| hematopoietic system \| muscles \| kidney and/or bladder \| respiratory system | Not classified | Multiple animal species | NOAEL 3.5 mg/l | 13 weeks |
| Xylene | Ingestion | auditory system | Not classified | Rat | NOAEL 900 mg/kg/day | 2 weeks |
| Xylene | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 1,500 mg/kg/day | 90 days |
| Xylene | Ingestion | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | heart \| skin \| endocrine system \| bone, teeth, nails, and/or hair \| hematopoietic system \| immune system \| nervous system \| respiratory system | Not classified | Mouse | NOAEL 1,000 mg/kg/day | 103 weeks |
| Methanol | Inhalation | liver | Not classified | Rat | NOAEL 6.55 mg/l | 4 weeks |
| Methanol | Inhalation | respiratory system | Not classified | Rat | NOAEL 13.1 mg/l | 6 weeks |
| Methanol | Ingestion | liver \| nervous system | Not classified | Rat | NOAEL 2,500 mg/kg/day | 90 days |
| Ethylbenzene | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.1 mg/l | 2 years |
| Ethylbenzene | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 1.1 mg/l | 103 weeks |
| Ethylbenzene | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 3.4 mg/l | 28 days |
| Ethylbenzene | Inhalation | auditory system | Not classified | Rat | NOAEL 2.4 mg/l | 5 days |
| Ethylbenzene | Inhalation | endocrine system | Not classified | Mouse | NOAEL 3.3 mg/l | 103 weeks |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ethylbenzene | Inhalation | gastrointestinal tract | Not classified | Rat | NOAEL 3.3 mg/l | 2 years |
| Ethylbenzene | Inhalation | bone, teeth, nails, and/or hair \| muscles | Not classified | Multiple animal species | NOAEL 4.2 mg/l | 90 days |
| Ethylbenzene | Inhalation | heart \| immune system \| respiratory system | Not classified | Multiple animal species | NOAEL 3.3 mg/l | 2 years |
| Ethylbenzene | Ingestion | liver \| kidney and/or bladder | Not classified | Rat | NOAEL 680 mg/kg/day | 6 months |
| Carbon dioxide | Inhalation | heart \| bone, teeth, nails, and/or hair \| liver \| nervous system \| kidney and/or bladder \| respiratory system | Not classified | Rat | LOAEL 60,000 ppm | 166 days |
| Heptane | Inhalation | liver \| nervous system \| kidney and/or bladder | Not classified | Rat | NOAEL 12 mg/l | 26 weeks |
| Dimethylcyclopentane | Inhalation | liver \| kidney and/or bladder \| heart \| skin \| endocrine system \| gastrointestinal tract \| bone, teeth, nails, and/or hair \| hematopoietic system \| immune system \| muscles \| nervous system \| eyes \| respiratory system \| vascular system | Not classified | Rat | NOAEL 20.2 mg/l | 13 weeks |
| Dimethylcyclopentane | Ingestion | peripheral nervous system | Not classified | Rat | NOAEL 800 mg/kg/day | 8 weeks |
| Dimethylcyclopentane | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 500 mg/kg/day | 4 weeks |
| Toluene | Inhalation | auditory system \| nervous system \| eyes \| olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| Toluene | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 2.3 mg/l | 15 months |
| Toluene | Inhalation | heart \| liver \| kidney and/or bladder | Not classified | Rat | NOAEL 11.3 mg/l | 15 weeks |
| Toluene | Inhalation | endocrine system | Not classified | Rat | NOAEL 1.1 mg/l | 4 weeks |
| Toluene | Inhalation | immune system | Not classified | Mouse | NOAEL Not available | 20 days |
| Toluene | Inhalation | bone, teeth, nails, and/or hair | Not classified | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| Toluene | Inhalation | hematopoietic system \| vascular system | Not classified | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | gastrointestinal tract | Not classified | Multiple animal species | NOAEL 11.3 mg/l | 15 weeks |
| Toluene | Ingestion | nervous system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 625 mg/kg/day | 13 weeks |
| Toluene | Ingestion | heart | Not classified | Rat | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | liver \| kidney and/or bladder | Not classified | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | hematopoietic system | Not classified | Mouse | NOAEL 600 mg/kg/day | 14 days |

| | | | | | | |
|---|---|---|---|---|---|---|
| Toluene | Ingestion | endocrine system | Not classified | Mouse | NOAEL 105 mg/kg/day | 28 days |
| Toluene | Ingestion | immune system | Not classified | Mouse | NOAEL 105 mg/kg/day | 4 weeks |
| Cumene | Inhalation | auditory system \| endocrine system \| hematopoietic system \| liver \| nervous system \| eyes | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 4.9 mg/l | 13 weeks |
| Cumene | Inhalation | respiratory system | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Ingestion | kidney and/or bladder \| heart \| endocrine system \| hematopoietic system \| liver \| respiratory system | Not classified | Rat | NOAEL 769 mg/kg/day | 6 months |

**Aspiration Hazard**

| Name | Value |
|---|---|
| Heptane, branched, cyclic and linear | Aspiration hazard |
| 3-Methylhexane | Aspiration hazard |
| Xylene | Aspiration hazard |
| 2-Methylhexane | Aspiration hazard |
| Ethylbenzene | Aspiration hazard |
| Heptane | Aspiration hazard |
| Dimethylcyclopentane | Aspiration hazard |
| Toluene | Aspiration hazard |
| Cumene | Aspiration hazard |

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

## SECTION 12: Ecological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.**

**12.1. Toxicity**

**Acute aquatic hazard:**
GHS Acute 2: Toxic to aquatic life.

**Chronic aquatic hazard:**
GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

| Material | CAS Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | 426260-76-6 | Green algae | Estimated | 72 hours | EL50 | 29 mg/l |
| Heptane, branched, cyclic and linear | 426260-76-6 | Water flea | Estimated | 48 hours | EL50 | 3 mg/l |
| Heptane, branched, cyclic and linear | 426260-76-6 | Rainbow trout | Experimental | 96 hours | LL50 | >13.4 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | 426260-76-6 | Green algae | Estimated | 72 hours | NOEL | 6.3 mg/l |
| Heptane, branched, cyclic and linear | 426260-76-6 | Water flea | Estimated | 21 days | NOEL | 1 mg/l |
| 2-Methylhexane | 591-76-4 | Water flea | Estimated | 48 hours | EC50 | 0.4 mg/l |
| 3-Methylhexane | 589-34-4 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Xylene | 1330-20-7 | Activated sludge | Estimated | 3 hours | NOEC | 157 mg/l |
| Xylene | 1330-20-7 | Green algae | Estimated | 72 hours | EC50 | 4.36 mg/l |
| Xylene | 1330-20-7 | Rainbow trout | Estimated | 96 hours | LC50 | 2.6 mg/l |
| Xylene | 1330-20-7 | Water flea | Estimated | 48 hours | EC50 | 3.82 mg/l |
| Xylene | 1330-20-7 | Green algae | Estimated | 72 hours | NOEC | 0.44 mg/l |
| Xylene | 1330-20-7 | Rainbow trout | Estimated | 56 days | NOEC | >1.3 mg/l |
| Xylene | 1330-20-7 | Water flea | Estimated | 7 days | NOEC | 0.96 mg/l |
| Ethylbenzene | 100-41-4 | Green algae | Estimated | 73 hours | EC50 | 4.36 mg/l |
| Ethylbenzene | 100-41-4 | Rainbow trout | Estimated | 96 hours | LC50 | 2.6 mg/l |
| Ethylbenzene | 100-41-4 | Water flea | Estimated | 48 hours | EC50 | 3.82 mg/l |
| Ethylbenzene | 100-41-4 | Activated sludge | Experimental | 49 hours | EC50 | 130 mg/l |
| Ethylbenzene | 100-41-4 | Green algae | Estimated | 73 hours | NOEC | 0.44 mg/l |
| Ethylbenzene | 100-41-4 | Rainbow trout | Estimated | 56 days | NOEC | >1.3 mg/l |
| Ethylbenzene | 100-41-4 | Water flea | Estimated | 7 days | NOEC | 0.96 mg/l |
| Methanol | 67-56-1 | Algae or other aquatic plants | Experimental | 96 hours | EC50 | 16.9 mg/l |
| Methanol | 67-56-1 | Bay mussel | Experimental | 96 hours | LC50 | 15,900 mg/l |
| Methanol | 67-56-1 | Bluegill | Experimental | 96 hours | LC50 | 15,400 mg/l |
| Methanol | 67-56-1 | Green algae | Experimental | 96 hours | ErC50 | 22,000 mg/l |
| Methanol | 67-56-1 | Sediment organism | Experimental | 96 hours | LC50 | 54,890 mg/l |
| Methanol | 67-56-1 | Water flea | Experimental | 48 hours | LC50 | 3,289 mg/l |
| Methanol | 67-56-1 | Green algae | Experimental | 96 hours | NOEC | 9.96 mg/l |
| Methanol | 67-56-1 | Medaka | Experimental | 8.33 days | NOEC | 158,000 mg/l |
| Methanol | 67-56-1 | Water flea | Experimental | 21 days | NOEC | 122 mg/l |
| Methanol | 67-56-1 | Activated sludge | Experimental | 3 hours | IC50 | >1,000 mg/l |
| Methanol | 67-56-1 | Barley | Experimental | 14 days | EC50 | 15,492 mg/kg (Dry Weight) |
| Methanol | 67-56-1 | Redworm | Experimental | 63 days | EC50 | 26,646 mg/kg (Dry Weight) |
| Methanol | 67-56-1 | Springtail | Experimental | 28 days | EC50 | 5,683 mg/kg (Dry Weight) |
| Carbon dioxide | 124-38-9 | Fish | Experimental | 96 hours | LC50 | 112.2 mg/l |
| Carbon dioxide | 124-38-9 | Atlantic Salmon | Experimental | 43 days | NOEC | 26 mg/l |
| Heptane | 142-82-5 | Water flea | Experimental | 48 hours | EC50 | 1.5 mg/l |
| Heptane | 142-82-5 | Water flea | Estimated | 21 days | NOEC | 0.17 mg/l |
| Dimethylcyclopentane | 2532-58-3 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Cumene | 98-82-8 | Activated sludge | Experimental | 3 hours | EC10 | >2,000 mg/l |
| Cumene | 98-82-8 | Green algae | Experimental | 72 hours | EC50 | 2.6 mg/l |
| Cumene | 98-82-8 | Mysid Shrimp | Experimental | 96 hours | EC50 | 1.2 mg/l |
| Cumene | 98-82-8 | Rainbow trout | Experimental | 96 hours | LC50 | 2.7 mg/l |
| Cumene | 98-82-8 | Water flea | Experimental | 48 hours | EC50 | 2.14 mg/l |
| Cumene | 98-82-8 | Green algae | Experimental | 72 hours | NOEC | 0.22 mg/l |
| Cumene | 98-82-8 | Water flea | Experimental | 21 days | NOEC | 0.35 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 96 hours | LC50 | 5.5 mg/l |
| Toluene | 108-88-3 | Grass Shrimp | Experimental | 96 hours | LC50 | 9.5 mg/l |
| Toluene | 108-88-3 | Green algae | Experimental | 72 hours | EC50 | 12.5 mg/l |
| Toluene | 108-88-3 | Leopard frog | Experimental | 9 days | LC50 | 0.39 mg/l |
| Toluene | 108-88-3 | Pink Salmon | Experimental | 96 hours | LC50 | 6.41 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 48 hours | EC50 | 3.78 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 40 days | NOEC | 1.39 mg/l |
| Toluene | 108-88-3 | Diatom | Experimental | 72 hours | NOEC | 10 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 7 days | NOEC | 0.74 mg/l |
| Toluene | 108-88-3 | Activated sludge | Experimental | 12 hours | IC50 | 292 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 16 hours | NOEC | 29 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 24 hours | EC50 | 84 mg/l |
| Toluene | 108-88-3 | Redworm | Experimental | 28 days | LC50 | >150 mg per kg of bodyweight |
| Toluene | 108-88-3 | Soil microbes | Experimental | 28 days | NOEC | <26 mg/kg (Dry Weight) |

### 12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | 426260-76-6 | Estimated Biodegradation | 28 days | BOD | 98 %BOD/ThOD | OECD 301F - Manometric respirometry |
| 2-Methylhexane | 591-76-4 | Estimated Biodegradation | 28 days | BOD | 93 %BOD/ThOD | OECD 301C - MITI test (I) |
| 2-Methylhexane | 591-76-4 | Estimated Photolysis | | Photolytic half-life (in air) | 4.3 days (t 1/2) | |
| 3-Methylhexane | 589-34-4 | Estimated Biodegradation | 28 days | BOD | 81 %BOD/ThOD | OECD 301F - Manometric respirometry |
| 3-Methylhexane | 589-34-4 | Estimated Photolysis | | Photolytic half-life (in air) | 4.2 days (t 1/2) | |
| Xylene | 1330-20-7 | Experimental Biodegradation | 28 days | BOD | 90-98 %BOD/ThOD | OECD 301F - Manometric respirometry |
| Xylene | 1330-20-7 | Experimental Photolysis | | Photolytic half-life (in air) | 1.4 days (t 1/2) | |
| Ethylbenzene | 100-41-4 | Experimental Biodegradation | 28 days | BOD | 90-98 %BOD/ThOD | OECD 301F - Manometric respirometry |
| Methanol | 67-56-1 | Experimental Biodegradation | 3 days | Percent degraded | 91 %degraded | |
| Methanol | 67-56-1 | Experimental Biodegradation | 14 days | BOD | 92 %BOD/ThOD | OECD 301C - MITI test (I) |
| Methanol | 67-56-1 | Experimental Photolysis | | Photolytic half-life (in air) | 35 days (t 1/2) | |
| Methanol | 67-56-1 | Experimental Soil Metabolism Aerobic | 5 days | CO2 evolution | 53.4 %CO2 evolution/THCO2 evolution | |
| Carbon dioxide | 124-38-9 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Heptane | 142-82-5 | Experimental Biodegradation | 28 days | BOD | 101 %BOD/ThOD | OECD 301C - MITI test (I) |
| Heptane | 142-82-5 | Experimental Photolysis | | Photolytic half-life (in air) | 4.24 days (t 1/2) | |
| Dimethylcyclopentane | 2532-58-3 | Estimated Biodegradation | 28 days | CO2 evolution | 12 %CO2 evolution/THCO2 evolution | |
| Dimethylcyclopentane | 2532-58-3 | Estimated Photolysis | | Photolytic half-life (in air) | 4.36 days (t 1/2) | |
| Cumene | 98-82-8 | Experimental Biodegradation | 14 days | BOD | 33 %BOD/ThOD | OECD 301C - MITI test (I) |
| Cumene | 98-82-8 | Experimental Photolysis | | Photolytic half-life (in air) | 4.5 days (t 1/2) | |
| Toluene | 108-88-3 | Experimental Biodegradation | 20 days | BOD | 80 %BOD/ThOD | APHA Std Meth Water/Wastewater |
| Toluene | 108-88-3 | Experimental Photolysis | | Photolytic half-life (in air) | 5.2 days (t 1/2) | |

### 12.3 : Bioaccumulative potential

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Heptane, branched, cyclic and linear | 426260-76-6 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 2-Methylhexane | 591-76-4 | Estimated Bioconcentration | | Bioaccumulation factor | 135 | |
| 3-Methylhexane | 589-34-4 | Estimated Bioconcentration | | Bioaccumulation factor | 148 | |
| Xylene | 1330-20-7 | Experimental BCF - Fish | 56 days | Bioaccumulation factor | 25.9 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ethylbenzene | 100-41-4 | Experimental BCF - Fish | 56 days | Bioaccumulation factor | 25.9 | |
| Methanol | 67-56-1 | Experimental BCF - Fish | 3 days | Bioaccumulation factor | <4.5 | |
| Methanol | 67-56-1 | Experimental Bioconcentration | | Log Kow | -0.77 | |
| Carbon dioxide | 124-38-9 | Experimental Bioconcentration | | Log Kow | 0.83 | |
| Heptane | 142-82-5 | Estimated Bioconcentration | | Bioaccumulation factor | 105 | |
| Dimethylcyclopentane | 2532-58-3 | Estimated Bioconcentration | | Bioaccumulation factor | 166 | |
| Cumene | 98-82-8 | Modeled Bioconcentration | | Bioaccumulation factor | 140 | Catalogic™ |
| Cumene | 98-82-8 | Experimental Bioconcentration | | Log Kow | 3.55 | OECD 107 log Kow shke flsk mtd |
| Toluene | 108-88-3 | Experimental BCF - Other | 72 hours | Bioaccumulation factor | 90 | |
| Toluene | 108-88-3 | Experimental Bioconcentration | | Log Kow | 2.73 | |

**12.4. Mobility in soil**
Please contact manufacturer for more details

**12.5 Other adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## SECTION 14: Transport Information

**International Regulations**

**UN No.:** UN1950
**UN Proper shipping name:** AEROSOLS

**Transportation Class (IMO):** 2.1-2.1 Flammable gases
**Transportation Class (IATA):** 2.1-2.1 Flammable gases
**Other Dangerous Goods Descriptions (IMO):** None assigned
**Other Dangerous Goods Descriptions (IATA):** None assigned
**Packing Group:** None assigned
**Marine pollutant:** None assigned

## SECTION 15: Regulatory information

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

**Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**This product may contain component(s) that are regulated by the following:**
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.
Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

## SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

**3M Singapore SDSs are available at www.3m.com.sg**