

Material Safety Data Sheet



Pro-Line Fuel System Cleaner Concentrate

1. Product and company identification

| | |
|------------------------------|--|
| Product name | : Pro-Line Fuel System Cleaner Concentrate |
| Material uses | : Cleaner. |
| Code | : 2031 |
| Supplier/Manufacturer | : LIQUI MOLY GmbH Jerg-Wieland-Strasse 4 D-89081 Ulm-Lehr, Germany Tel.: +49(0)731 / 1420-0 Fax: +49(0)731 / 1420-88 |
| Validation date | : 2/14/2011. |
| Prepared by | : Chemical Check GmbH |
| In case of emergency | : +49(0)731 / 1420-0 |

2. Hazards identification

| | |
|---|---|
| Physical state | : Liquid. |
| Color | : <input checked="" type="checkbox"/> Yellow. [Light] |
| Odor | : Characteristic. |
| Emergency overview | |
| Signal word | : WARNING! |
| Hazard statements | : <input checked="" type="checkbox"/> COMBUSTIBLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS. |
| Precautions | : Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. |
| Routes of entry | : Dermal contact. Eye contact. Inhalation. Ingestion. |
| Potential acute health effects | |
| Inhalation | : Can cause central nervous system (CNS) depression. Irritating to respiratory system. |
| Ingestion | : Can cause central nervous system (CNS) depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. |
| Skin | : <input checked="" type="checkbox"/> Harmful in contact with skin. Irritating to skin. Defatting to the skin. |
| Eyes | : Severely irritating to eyes. Risk of serious damage to eyes. |
| Potential chronic health effects | |
| Chronic effects | : Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. |

2. Hazards identification

- Carcinogenicity** : Can cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Can cause birth defects.
- Developmental effects** : Can cause developmental abnormalities.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
- Over-exposure signs/symptoms**
- Inhalation** : Adverse symptoms may include the following:
 nausea or vomiting
 respiratory tract irritation
 coughing
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
- Skin** : Adverse symptoms may include the following:
 irritation
 redness
 dryness
 cracking
 reduced fetal weight
 increase in fetal deaths
- Eyes** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
 reduced fetal weight
 increase in fetal deaths
- Other adverse symptoms** : Adverse symptoms may include the following:
 Ingestion:
 pulmonary edema
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

| Name | CAS number | % |
|------|------------|---|
| | | |

3. Composition/information on ingredients

| | | |
|--|------------|--------|
| Naphtha (petroleum), hydrodesulfurized heavy | 64742-82-1 | 60-100 |
| Polyolefin alkyl phenol alkyl amine | | 1-5 |
| 2-Methylpropan-1-ol | 78-83-1 | 1-5 |
| xylene | 1330-20-7 | 1-5 |
| Solvent naphtha (petroleum), light arom. | 64742-95-6 | 1-5 |
| 1,2,4-trimethylbenzene | 95-63-6 | 1-5 |
| Naphthalene | 91-20-3 | 0.1-1 |
| Mesitylene | 108-67-8 | 0.1-1 |
| ethylbenzene | 100-41-4 | 0.1-1 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Antidote information

| Product/ingredient name | Antidote information |
|-------------------------------|----------------------|
| No antidote information known | |

- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

- Suitable** : Use dry chemical, CO₂ or foam. Cool closed containers exposed to fire with water.
- Not suitable** : Do not use water jet.

5. Fire-fighting measures

- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
Hydrocarbons
Toxic pyrolysis products
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on fire hazards** : In use, may form flammable/explosive vapor-air mixture.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away

7. Handling and storage

from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

| Occupational exposure limits | | TWA (8 hours) | | | STEL (15 mins) | | | Ceiling | | | |
|--|------------------|----------------------|-------------------------|--------------|-----------------------|-------------------------|--------------|----------------|-------------------------|--------------|------------------|
| Ingredient | List name | ppm | mg/m³ | Other | ppm | mg/m³ | Other | ppm | mg/m³ | Other | Notations |
| Naphtha (petroleum), hydrodesulfurized heavy | US ACGIH 1/2009 | - | 5 | - | - | 10 | - | - | - | - | [a] |
| | US ACGIH 2/2010 | 50 | 152 | - | - | - | - | - | - | - | |
| 2-Methylpropan-1-ol | AB 4/2009 | 50 | 152 | - | - | - | - | - | - | - | [3] |
| | BC 10/2009 | 50 | - | - | - | - | - | - | - | - | |
| | ON 7/2010 | 50 | 152 | - | - | - | - | - | - | - | |
| | QC 6/2008 | 50 | 152 | - | - | - | - | - | - | - | |
| | US ACGIH 2/2010 | 100 | 434 | - | 150 | 651 | - | - | - | - | |
| | AB 4/2009 | 100 | 434 | - | 150 | 651 | - | - | - | - | |
| xylene | BC 10/2009 | 100 | - | - | 150 | - | - | - | - | - | |
| | ON 7/2010 | 100 | 434 | - | 150 | 651 | - | - | - | - | |
| | QC 6/2008 | 100 | 434 | - | 150 | 651 | - | - | - | - | |
| | US ACGIH 2/2010 | 25 | 123 | - | - | - | - | - | - | - | |
| | AB 4/2009 | 25 | 123 | - | - | - | - | - | - | - | |
| | BC 10/2009 | 25 | - | - | - | - | - | - | - | - | |
| Mesitylene | ON 7/2010 | 25 | 123 | - | - | - | - | - | - | - | |
| | QC 6/2008 | 25 | 123 | - | - | - | - | - | - | - | |
| | US ACGIH 2/2010 | 10 | 52 | - | 15 | 79 | - | - | - | - | |
| | AB 4/2009 | 10 | 52 | - | 15 | 79 | - | - | - | - | [1] |
| | BC 10/2009 | 10 | - | - | 15 | - | - | - | - | - | [1] |
| | ON 7/2010 | 10 | 52 | - | 15 | 79 | - | - | - | - | |
| Naphthalene | QC 6/2008 | 10 | 52 | - | 15 | 79 | - | - | - | - | |
| | US ACGIH 2/2010 | 25 | 123 | - | - | - | - | - | - | - | |
| | AB 4/2009 | 25 | 123 | - | - | - | - | - | - | - | |
| | BC 10/2009 | 25 | - | - | - | - | - | - | - | - | |
| | ON 7/2010 | 25 | 123 | - | - | - | - | - | - | - | |
| | QC 6/2008 | 25 | 123 | - | - | - | - | - | - | - | |
| 1,2,4-trimethylbenzene | US ACGIH 2/2010 | 100 | - | - | 125 | - | - | - | - | - | |
| | AB 4/2009 | 100 | 434 | - | 125 | 543 | - | - | - | - | |
| | BC 10/2009 | 100 | - | - | 125 | - | - | - | - | - | |
| | ON 7/2010 | 100 | - | - | 125 | - | - | - | - | - | |
| | QC 6/2008 | 100 | 434 | - | 125 | 543 | - | - | - | - | |
| | US ACGIH 2/2010 | 100 | - | - | 125 | - | - | - | - | - | |
| ethylbenzene | AB 4/2009 | 100 | 434 | - | 125 | 543 | - | - | - | - | |
| | BC 10/2009 | 100 | - | - | 125 | - | - | - | - | - | |
| | ON 7/2010 | 100 | - | - | 125 | - | - | - | - | - | |
| | QC 6/2008 | 100 | 434 | - | 125 | 543 | - | - | - | - | |
| | US ACGIH 2/2010 | 100 | - | - | 125 | - | - | - | - | - | |
| | AB 4/2009 | 100 | 434 | - | 125 | 543 | - | - | - | - | |

[1]Absorbed through skin. [3]Skin sensitization

Form: [a]Mist

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

8. Exposure controls/personal protection

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Use appropriate respiratory protection if there is a risk of exceeding any exposure limits. organic vapor filter (Type A)
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
 If applicable: Nitrile gloves. Neoprene gloves. Recommended: Protective hand cream.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Tight fitting protective goggles with side shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Long-sleeved protective clothing. Safety shoes.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



9. Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : 40°C (104°F)
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : Yellow. [Light]
- Odor** : Characteristic.
- pH** : Not available.
- Boiling/condensation point** : 145 to 200°C (293 to 392°F)
- Melting/freezing point** : Not available.
- Density** : 0.808 g/cm³ [15°C (59°F)]
- Vapor pressure** : Not available.
- Vapor density** : >1 [Air = 1]
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

9. Physical and chemical properties

- Solubility** : Insoluble in the following materials: cold water.
LogK_{ow} : Not available.


10. Stability and reactivity

- Chemical stability** : The product is stable.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials :  Reactive or incompatible with the following materials:
oxidizing materials
acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|-------------------------|----------|
|  Naphtha (petroleum), hydrodesulfurized heavy | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >2000 mg/kg | - |
| 2-Methylpropan-1-ol | LC50 Inhalation Vapor | Rat | 19200 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 3400 mg/kg | - |
| xylene | LD50 Oral | Rat | 2460 mg/kg | - |
| | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >1700 mg/kg | - |
| Mesitylene | LD50 Oral | Rat | 4300 mg/kg | - |
| | LC50 Inhalation Vapor | Rat | 24000 mg/m ³ | 4 hours |
| Naphthalene | LD50 Oral | Rat | 5000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >440 mg/L | 1 hours |
| | LC50 Inhalation Dusts and mists | Rat | >110 mg/L | 4 hours |
| 1,2,4-trimethylbenzene | LD50 Dermal | Rabbit | >20 g/kg | - |
| | LD50 Dermal | Rat | >2500 mg/kg | - |
| | LD50 Oral | Rat | 490 mg/kg | - |
| | LC50 Inhalation Vapor | Rat | 18000 mg/m ³ | 4 hours |
| | LD50 Oral | Rat | 5 g/kg | - |
| Solvent naphtha (petroleum), light arom. | LD50 Oral | Rat | 8400 mg/kg | - |
| | LD50 Oral | Rat | 8400 mg/kg | - |
| ethylbenzene | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |

Chronic toxicity

Not available.

Irritation/Corrosion

11. Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|----------|-------------|
| Xylene | Eyes - Mild irritant | Rabbit | - | - | - |
| | Eyes - Severe irritant | Rabbit | - | - | - |
| | Skin - Mild irritant | Rat | - | - | - |
| Mesitylene | Skin - Moderate irritant | Rabbit | - | - | - |
| | Eyes - Mild irritant | Rabbit | - | - | - |
| Naphthalene | Skin - Moderate irritant | Rabbit | - | - | - |
| | Skin - Mild irritant | Rabbit | - | - | - |
| Solvent naphtha (petroleum), light arom. | Skin - Severe irritant | Rabbit | - | - | - |
| | Eyes - Mild irritant | Rabbit | - | - | - |
| ethylbenzene | Eyes - Severe irritant | Rabbit | - | - | - |
| | Skin - Mild irritant | Rabbit | - | - | - |

Sensitizer

Not available.

Conclusion/Summary : Not available.

Carcinogenicity

Classification

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
|-------------------------|-------|------|-----|-------|----------|------|
| Xylene | A4 | 3 | - | - | - | - |
| Naphthalene | A4 | 2B | - | - | Possible | - |
| ethylbenzene | A3 | 2B | - | - | - | - |

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Aquatic ecotoxicity

| Product/ingredient name | Result | Species | Exposure |
|--|-------------------------------------|---|----------|
| Naphtha (petroleum), hydrodesulfurized heavy | Acute EC50 1 to 10 mg/l | Daphnia | 48 hours |
| | Acute IC50 1 to 10 mg/l | Algae | 72 hours |
| 2-Methylpropan-1-ol | Acute LC50 1 to 10 mg/l | Fish | 96 hours |
| | Acute LC50 600000 ug/L Marine water | Crustaceans - Artemia salina - Nauplii | 48 hours |
| | Acute LC50 1030000 ug/L Fresh water | Daphnia - Daphnia magna - Neonate - 0 to 24 hours | 48 hours |
| xylene | Acute LC50 1330000 ug/L Fresh water | Fish - Oncorhynchus mykiss - 1.67 g | 96 hours |
| | Acute LC50 8500 ug/L Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| | Acute LC50 3300 ug/L Fresh water | Fish - Oncorhynchus mykiss - 0.6 | 96 hours |

12. Ecological information

| | | | |
|------------------------|-------------------------------------|---|----------|
| Mesitylene | Acute LC50 13000 ug/L Marine water | g Crustaceans - Cancer magister - Zoea | 48 hours |
| | Acute LC50 12520 ug/L Fresh water | Fish - Carassius auratus - 1 to 15 years - 13 to 20 cm - 20 to 80 g | 96 hours |
| Naphthalene | Acute EC50 1600 ug/L Fresh water | Daphnia - Daphnia magna - Neonate - <=24 hours | 48 hours |
| | Acute LC50 2350 ug/L Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| | Acute LC50 213 ug/L Fresh water | Fish - Melanotaenia fluviatilis - LARVAE - 1 days | 96 hours |
| 1,2,4-trimethylbenzene | Chronic NOEC 600 ug/L Fresh water | Daphnia - Daphnia magna - <=24 hours | 48 hours |
| | Acute EC50 3.6 mg/l | Daphnia | 48 hours |
| | Acute LC50 17000 ug/L Marine water | Crustaceans - Cancer magister - Zoea | 48 hours |
| | Acute LC50 7720 ug/L Fresh water | Fish - Pimephales promelas - 34 days | 96 hours |
| ethylbenzene | Acute EC50 2930 ug/L Fresh water | Daphnia - Daphnia magna - Neonate - <=24 hours | 48 hours |
| | Acute LC50 >5200 ug/L Marine water | Crustaceans - Americamysis bahia - <24 hours | 48 hours |
| | Acute LC50 4200 ug/L Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 6800 ug/L Fresh water | Daphnia - Daphnia magna - <=24 hours | 48 hours |
| | Chronic NOEC 3300 ug/L Marine water | Fish - Menidia menidia | 96 hours |

Persistence/degradability

Not available.

| | |
|---|---|
| Partition coefficient: n-octanol/water | : Not available. |
| Bioconcentration factor | : Not available. |
| Mobility | : Not available. |
| Toxicity of the products of biodegradation | : Not available. |
| Other adverse effects | : No known significant effects or critical hazards. |

13. Disposal considerations






| | |
|-----------------------|---|
| Waste disposal | : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. |
|-----------------------|---|

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---------------------------|-----------|--|---------|-----|--|--|
| TDG Classification | UN1993 | FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy) | 3 | III |  | Explosive Limit and Limited Quantity Index 5 Passenger Carrying Road or Rail Index 60 Special provisions 16 |
| IMDG Class | UN1993 | FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy). Marine pollutant (Naphtha (petroleum), hydrodesulfurized heavy, Solvent naphtha (petroleum), heavy arom.) | 3 | III |   | Emergency schedules (EmS) F-E, _S-E_ |
| IATA-DGR Class | UN1993 | Flammable liquid, n.o.s. (Naphtha (petroleum), hydrodesulfurized heavy) | 3 | III |   | Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 355 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 366 Limited Quantities - Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y344 |

PG* : Packing group

15. Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: i-Butyl alcohol; Heavy aromatic solvent naphtha; 1,2,4-Trimethylbenzene; Light aromatic solvent naphtha; Xylene

CEPA Toxic substances : The following components are listed: Naphthalene

Canada inventory : All components are listed or exempted.

15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : **☑** COMBUSTIBLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

Hazardous Material Information System (U.S.A.) :

| | | |
|------------------|---|---|
| Health | * | 2 |
| Flammability | | 2 |
| Physical hazards | | 0 |
| | | |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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Date of previous issue : No previous validation
Version : 2

☑ Indicates information that has changed from previously issued version.

16. Other information

[Notice to reader](#)

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.