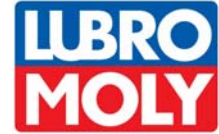


Material Safety Data Sheet



Pro-Line Fuel System Cleaner, Art. 2030

1. Product and company identification

Product name : Pro-Line Fuel System Cleaner, Art. 2030
Material uses : Not available.
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 : 08/30/2008
Responsible name : Chemical Check GmbH
In case of emergency : +49(0)731 / 1420-0

2. Hazards identification

Physical state : Liquid. [Clear.]
Odor : Characteristic.
Emergency overview : WARNING!

COMBUSTIBLE. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

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. Avoid contact with skin and clothing. Risk of cancer depends on duration and level of exposure. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : Vapors may cause drowsiness and dizziness.
Ingestion : Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : Irritating to skin. May be harmful in contact with skin.
Eyes : Irritating to eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.
Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : Contains material which can cause developmental abnormalities.
Fertility effects : No known significant effects or critical hazards.
Target organs : Contains material which causes damage to the following organs: blood, kidneys, liver, gastrointestinal tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : Adverse symptoms may include the following:
irritation
redness

2. Hazards identification

- Eyes** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- 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.
- See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	%
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	60 - 100
Xylene	1330-20-7	5 - 10
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	5 - 10
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1
Naphthalene	91-20-3	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. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
- Skin contact** : Wash with soap and water. Get medical attention if symptoms occur.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- 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.
- 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
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : 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
 hydrocarbons
 toxic pyrolysis products
 explosive vapour/air mixture

5 . Fire-fighting measures

- 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.

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. Avoid breathing 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. 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. 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. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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 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

Product name

Naphtha (petroleum), hydrodesulfurized heavy

Xylene

Solvent naphtha (petroleum), heavy aromatic

1,2,4-Trimethylbenzene

Naphthalene

Exposure limits

ACGIH TLV (United States).

TWA: 100 ppm

CA Alberta Provincial (Canada, 10/2006).

8 hrs OEL: 100 ppm 8 hour(s).

15 min OEL: 651 mg/m³ 15 minute(s).

15 min OEL: 150 ppm 15 minute(s).

8 hrs OEL: 434 mg/m³ 8 hour(s).

CA British Columbia Provincial (Canada, 7/2007).

TWA: 100 ppm 8 hour(s).

STEL: 150 ppm 15 minute(s).

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 100 ppm 8 hour(s).

TWAEV: 435 mg/m³ 8 hour(s).

STEV: 150 ppm 15 minute(s).

STEV: 650 mg/m³ 15 minute(s).

CA Quebec Provincial (Canada, 12/2006).

TWAEV: 100 ppm 8 hour(s).

TWAEV: 434 mg/m³ 8 hour(s).

STEV: 150 ppm 15 minute(s).

STEV: 651 mg/m³ 15 minute(s).

Manufacturier (Canada).

TWA: 17 ppm 8 hour(s).

CA Alberta Provincial (Canada, 10/2006).

8 hrs OEL: 123 mg/m³ 8 hour(s).

8 hrs OEL: 25 ppm 8 hour(s).

CA British Columbia Provincial (Canada, 7/2007).

TWA: 25 ppm 8 hour(s).

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 25 ppm 8 hour(s).

TWAEV: 123 mg/m³ 8 hour(s).

CA Quebec Provincial (Canada, 12/2006).

TWAEV: 25 ppm 8 hour(s).

TWAEV: 123 mg/m³ 8 hour(s).

CA Alberta Provincial (Canada, 10/2006). Skin

15 min OEL: 15 ppm 15 minute(s).

8 hrs OEL: 10 ppm 8 hour(s).

8 hrs OEL: 52 mg/m³ 8 hour(s).

15 min OEL: 79 mg/m³ 15 minute(s).

CA British Columbia Provincial (Canada, 7/2007). Skin

TWA: 10 ppm 8 hour(s).

STEL: 15 ppm 15 minute(s).

CA Ontario Provincial (Canada, 3/2007).

TWAEV: 10 ppm 8 hour(s).

TWAEV: 52 mg/m³ 8 hour(s).

STEV: 15 ppm 15 minute(s).

STEV: 78 mg/m³ 15 minute(s).

CA Quebec Provincial (Canada, 12/2006).

TWAEV: 10 ppm 8 hour(s).

TWAEV: 52 mg/m³ 8 hour(s).

STEV: 15 ppm 15 minute(s).

STEV: 79 mg/m³ 15 minute(s).

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**
- 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, gases or dusts.
- 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.
- Respiratory** : Use a properly fitted, air-purifying or supplied air 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.
- 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.
- 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. [Clear.]
- Flash point** : Closed cup: 39°C (102.2°F) [Pensky-Martens.]
- Color** : Yellow. [Light]
- Odor** : Characteristic.
- Density** : 0.816 g/cm³ [15°C (59°F)]
- Viscosity** : Kinematic (40°C): <0.07 cm²/s (<7 cSt)
- Solubility** : Insoluble in water.

10 . Stability and reactivity

- Stability** : The product is stable.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials and acids.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Conditions of reactivity** : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Flammable in the presence of the following materials or conditions: heat.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Species	Dose	Result	Exposure
Xylene	Rabbit	>1700 mg/kg	LD50 Dermal	-
	Rat	4300 mg/kg	LD50 Oral	-
Solvent naphtha (petroleum), heavy aromatic	Rabbit	>2 mL/kg	LD50 Dermal	-
	Rat	>590 mg/m ³	LC50 Inhalation Vapor	4 hours
Naphthalene	Rabbit	>20 g/kg	LD50 Dermal	-
	Rat	>2500 mg/kg	LD50 Dermal	-
	Rat	>490 mg/kg	LD50 Oral	-

Inhalation : Vapors may cause drowsiness and dizziness.

Ingestion : Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : Irritating to skin. May be harmful in contact with skin.

Eyes : Irritating to eyes.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Xylene	A4	3	-	-	-	-
Naphthalene	A4	2B	-	None.	Possible	-

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Species	Exposure	Result
Xylene	Crustaceans	48 hours	Acute LC50 8500 ug/L
	Fish	96 hours	Acute LC50 3300 to 4093 ug/L
Naphthalene	Daphnia	48 hours	Acute EC50 1.96 mg/L
	Fish	96 hours	Acute LC50 2.25 mg/L
	Daphnia	48 hours	Acute LC50 17.4 mg/L
	Fish	96 hours	Acute LC50 2.1 ppm
	Crustaceans	48 hours	Acute LC50 2.6 to 2.89 ppm

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. 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. 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.

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

AERG : 128

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1268	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy)	3	III		-
IMDG Class	UN1268	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy)	3	III	 	Emergency schedules (EmS) F-E, S-E Marine pollutant
IATA-DGR Class	UN1268	PETROLEUM DISTILLATES, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy)	3	III		-

PG* : Packing group

15 . Regulatory information

Canada

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

- : **CEPA Toxic substances:** The following components are listed: Naphthalene
- Canadian ARET:** None of the components are listed.
- Canadian NPRI:** The following components are listed: Xylene;Heavy aromatic solvent naphtha
- Alberta Designated Substances:** None of the components are listed.
- Ontario Designated Substances:** None of the components are listed.
- Quebec Designated Substances:** None of the components are listed.

Canada inventory

- : All components are listed or exempted.

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

- : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements : COMBUSTIBLE. CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL OR FATAL IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

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

Health	*	1
Fire hazard		2
Physical Hazard		0
Personal protection		B

HAZARD RATINGS

4- Extreme
3- Serious
2- Moderate
1- Slight
0- Minimal

See section 8 for more detailed information on personal protection.

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

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.5, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

Date of issue : 08/30/2008

Version : 1

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.