



22248 Pro-Line Diesel System Cleaner Concentrate

Safety Data Sheet

According to 29CFR 1910.1200 OSHA Hazard Communication Standard and the Hazardous Products Regulation (WHMIS 2015)

Issue date: 9/23/2023 Revision date: 9/23/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : 22248 Pro-Line Diesel System Cleaner Concentrate
Product code :

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Fuel additives
Restrictions on use : None known

1.3. Supplier

Liqui Moly GmbH
Jerg-Wieland-Strasse 4 Ulm D-89081 Germany
T +49 731 1420 0
info@liqui-moly.de - www.liqui-moly.us

1.4. Emergency telephone number

Emergency number : INFOTRAC
+1800 535 5053 (USA, Canada); +1352 323 3500 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	H227	Combustible liquid
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Hazardous to the aquatic environment – Acute Hazard Category 2	H401	Toxic to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P280 - Wear protective gloves.
P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor.
P331 - Do NOT induce vomiting.
P370+P378 - In case of fire: Use carbon dioxide (CO₂), dry extinguishing powder, foam to extinguish.

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P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None known.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Distillates (petroleum), hydrotreated light	CAS-No.: 64742-47-8	65-85
2_Ethylhexyl_nitrate	CAS-No.: 27247-96-7	7-13
2-Ethylhexanol	CAS-No.: 104-76-7	1-5
Distillates (petroleum), hydrotreated heavy paraffinic	CAS-No.: 64742-54-7	0.1-5

Comments : *Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact : Wash skin with mild soap and water. Get medical advice if skin irritation persists.
First-aid measures after eye contact : Rinse eyes with water as a precaution. Get medical attention if irritation develops and persists.
First-aid measures after ingestion : Aspiration hazard. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Seek immediate medical advice.

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

Symptoms/effects : May be fatal if swallowed and enters airways.
Inhalation : Inhalation of mists or vapors at elevated temperatures may cause respiratory irritation.
Skin : Repeated or prolonged skin contact may cause dermatitis and defatting.
Eyes : May cause minor eye irritation.
Ingestion : May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.
Chronic symptoms : None known.

4.3. Immediate medical attention and special treatment, if necessary

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Use of heavy stream of water may spread fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.
Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO₂). Fire will produce dense black smoke.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Cool down the containers exposed to heat with a water spray.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with eyes, skin and clothing. Eliminate ignition sources.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Avoid breathing mist, vapors. Keep away from open flames, hot surfaces and sources of ignition. Do not ingest.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store product sealed in the original container, away from heat and out of direct sunlight.
Incompatible materials : Strong oxidizers.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available	
Distillates (petroleum), hydrotreated light (64742-47-8)	
No additional information available	
2_Ethylhexyl_nitrate (27247-96-7)	
No additional information available	
2-Ethylhexanol (104-76-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Ethyl-1-hexanol
ACGIH OEL TWA [ppm]	5 ppm
Remark (ACGIH)	TLV® Basis: URT irr & eye irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2023
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Mineral oil, excluding metal working fluids Pure, highly and severely refined
ACGIH OEL TWA	5 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Oil mist, mineral
OSHA PEL (TWA)	5 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
In case of repeated or prolonged contact wear gloves. Consult supplier for specific recommendations.
Eye protection:
Avoid contact with eyes. Safety glasses with side shields
Skin and body protection:
Wear suitable protective clothing

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Respiratory protection:

In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear. Liquid.
Color	: Amber
Odor	: Characteristic
Odor threshold	: No data available
pH	: Not applicable
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 180 °C
Flash point	: 63 °C (145.4°F)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.834 @ 15°C
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: < 7 mm ² /s @40C
Viscosity, dynamic	: No data available
Explosion limits	: Lower explosion limit: 0.7 vol % Upper explosion limit: 6 vol %
Explosive properties	: None.
Oxidizing properties	: None.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Distillates (petroleum), hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 6.8 mg/l/4h

2 Ethylhexyl nitrate (27247-96-7)	
LD50 oral rat	> 9640 mg/kg Source: IUCLID
LD50 dermal rabbit	5 ml/kg
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

2-Ethylhexanol (104-76-7)	
LD50 oral rat	≈ 2047 mg/kg body weight
LD50 dermal rat	> 3000 mg/kg
LC50 Inhalation - Rat	0.89 – 5.3 mg/l air
ATE US (vapors)	11 mg/l/4h

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight
LD50 dermal rabbit	> 5000 mg/kg Source: IUCLID
LC50 Inhalation - Rat	> 5000 mg/m³

Skin corrosion/irritation : Not classified
pH: Not applicable
Serious eye damage/irritation : Not classified
pH: Not applicable
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

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Distillates (petroleum), hydrotreated light (64742-47-8)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg body weight Animal: rat, Animal sex: male
STOT-single exposure	: Not classified
2-Ethylhexanol (104-76-7)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
2_Ethylhexyl_nitrate (27247-96-7)	
NOAEL (dermal,rat/rabbit,90 days)	500 mg/kg body weight Animal: rabbit, Guideline: EPA OPP 82-2 (Repeated Dose Dermal Toxicity -21/28 Days)
2-Ethylhexanol (104-76-7)	
NOAEL (oral,rat,90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation,rat,gas,90 days)	120 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Aspiration hazard	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: < 7 mm²/s @40C
Distillates (petroleum), hydrotreated light (64742-47-8)	
Viscosity, kinematic	1.764 mm²/s @40C
2-Ethylhexanol (104-76-7)	
Viscosity, kinematic	11.772 mm²/s
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	73.9 mm²/s
Symptoms/effects	: May be fatal if swallowed and enters airways.
Inhalation	: Inhalation of mists or vapors at elevated temperatures may cause respiratory irritation.
Skin	: Repeated or prolonged skin contact may cause dermatitis and defatting.
Eyes	: May cause minor eye irritation.
Ingestion	: May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.
Chronic symptoms	: None known.

SECTION 12: Ecological information

12.1. Toxicity

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

Distillates (petroleum), hydrotreated light (64742-47-8)	
EC50 - Crustacea [1]	> 1000 mg/l
2_Ethylhexyl_nitrate (27247-96-7)	
LC50 - Fish [1]	2 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 12.6 mg/l Test organisms (species): Daphnia magna

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2_Ethylhexyl_nitrate (27247-96-7)	
EC50 - Other aquatic organisms [1]	1.57 – 3.22 mg/l 72 hr
EC50 - Crustacea [2]	0.83 mg/l (OECD 202) Daphnia magna
EC50 72h - Algae [1]	3.22 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	1.57 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	1.111 mg/l Source: ECOSAR
ErC50 algae	2.53 mg/l (OECD 201)

2-Ethylhexanol (104-76-7)	
LC50 - Fish [1]	28.2 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	39 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	17.1 mg/l Test organisms (species): Leuciscus idus melanotus
EC50 72h - Algae [1]	11.5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	16.6 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	≥ 100 mg/l
EC50 - Crustacea [1]	> 10000 ml/l
EC50 96h - Algae [1]	> 1000 mg/l Source: IUCLID

12.2. Persistence and degradability

Distillates (petroleum), hydrotreated light (64742-47-8)	
Biodegradation	85 % OECD 301F (28d)

2_Ethylhexyl_nitrate (27247-96-7)	
Not rapidly degradable	

12.3. Bioaccumulative potential

2_Ethylhexyl_nitrate (27247-96-7)	
BCF - Fish [1]	1248
Partition coefficient n-octanol/water (Log Pow)	4.12
Partition coefficient n-octanol/water (Log Kow)	5.24

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
The product is shipped unregulated because it is packaged in either single packages or a combination of inner packagings containing net quantities of less than 5 kg/5 L (IMDG Code 2.10.2.7; ICAO Special Instruction A197, 49CFR 171.4(c)(2)). Shipment may be regulated if contents are removed from inner packaging and combined into containers exceeding 5kg or 5L. The requirements of the US DOT Hazardous Materials Regulations do not apply to a material classed as a combustible liquid in a non-bulk packaging unless the combustible liquid is a hazardous substance, a hazardous waste, or a marine pollutant.			

14.6. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Refer to Section 2 for OSHA Hazard Classification.
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Distillates (petroleum), hydrotreated light (64742-47-8)

Listed on the Canadian DSL (Domestic Substances List)

2_Ethylhexyl_nitrate (27247-96-7)

Listed on the Canadian DSL (Domestic Substances List)

2-Ethylhexanol (104-76-7)

Listed on the Canadian DSL (Domestic Substances List)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

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Listed on the Canadian DSL (Domestic Substances List)

15.3. US State regulations



WARNING:

This product can expose you to Naphthalene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

According to 29CFR 1910.1200 OSHA Hazard Communication Standard and the Hazardous Products Regulation (WHMIS 2015)

Revision date : 9/23/2023

Data sources : This safety data sheet was compiled with data and information from the following sources : RTECS, ECOSAR, HSDB, SIDS SIAP, CESAR, Chemical DB.

Full text of H-phrases

H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

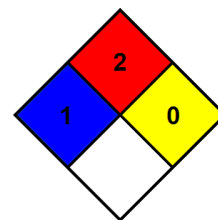
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NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

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



Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.