2037, 22246 Pro-Line Engine Flush

Safety Data Sheet

According to 29CFR 1910.1200 OSHA Hazard Communication Standard (HCS 2024) and the Hazardous Products Regulation (WHMIS 2015 rev 2022)
Revision date: 6/17/2025 Supersedes: 4/29/2021 Version: 9.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : 2037, 22246 Pro-Line Engine Flush

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Engine oil,Cleaner
Restrictions on use : None known

1.4. Supplier's details

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

1.5. Emergency phone number

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

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 4	H227	Combustible liquid.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways.

Full text of H statements : see section 16

2.2. Label elements

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
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing mist.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.

P280 - Wear protective gloves.
P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor.
P331 - Do NOT induce vomiting.
P302+P352 - If on skin: Wash with plenty of soap and water.
P333+P313 - If skin irritation or rash occurs: Get medical attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical attention.
P370+P378 - In case of fire: Use carbon dioxide (CO2), dry extinguishing powder, foam to extinguish.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P501 - Dispose of to an approved waste disposal plant to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

None known

2.4. Hazards not otherwise classified

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

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Distallates (petroleum), hydrotreated light	CAS-No.: 64742-47-8	80-100
Highly refined mineral oil (C15-C50)	CAS-No.: Proprietary	1 – 5
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	CAS-No.: 68442-22-8	1 – 5
Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	CAS-No.: 722503-68-6	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 necessary 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. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. 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/effects, acute and delayed

Symptoms/effects : May be fatal if swallowed and enters airways. May cause an allergic skin reaction.

Inhalation : Inhalation of mists or vapors at elevated temperatures may cause respiratory irritation.

Skin : May cause an allergic skin reaction. Repeated or prolonged skin contact may cause dermatitis and defatting.

Eyes : Causes serious 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. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : 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

General measures : Eliminate all ignition sources. Avoid contact with eyes, skin and clothing.

For non-emergency personnel

Emergency procedures : Keep unnecessary and unprotected personnel away from the spillage.

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".

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials 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.

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 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.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Highly refined mineral oil (C15-C50) (Proprietary)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	5 mg/m³ inhalable
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA)	5 mg/m³

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, such as 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. Chemical goggles
Skin and body protection:
Wear suitable protective clothing
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. Basic physical and chemical properties

Physical state : Liquid

Appearance	:	Clear. Liquid.
Color	:	Yellow to brown
Odor	:	Characteristic
Odor threshold	:	No data available
pH	:	Not applicable
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	187 – 216 °C
Flash point	:	63 °C (145.4°F)
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	0.806
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	:	2.8 mm²/s @40C
Explosion limits	:	Lower explosion limit: 0.7 vol % Upper explosion limit: 6 vol %
Explosive properties	:	None.
Oxidizing properties	:	None.
Particle characteristics	:	Particle characteristics : Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

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.

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

Distallates (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

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts (68442-22-8)	
LD50 oral rat	2000 – 5000 mg/kg body weight Animal: rat, Guideline: other:
LD50 dermal rat	> 2002 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg Source: ECHA

Skin corrosion/irritation : Not classified
pH: Not applicable

Serious eye damage/irritation : Causes serious eye irritation.
pH: Not applicable

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Distallates (petroleum), hydrotreated light (64742-47-8)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg body weight

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts (68442-22-8)	
NOAEL (oral,rat,90 days)	160 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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

2037, 22246 Pro-Line Engine Flush	
Viscosity, kinematic	2.8 mm²/s @40C

Symptoms/effects : May be fatal if swallowed and enters airways. May cause an allergic skin reaction.

Inhalation : Inhalation of mists or vapors at elevated temperatures may cause respiratory irritation.

Skin : May cause an allergic skin reaction. Repeated or prolonged skin contact may cause dermatitis and defatting.

Eyes : Causes serious 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. Ecotoxicity

Ecology - general : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Distallates (petroleum), hydrotreated light (64742-47-8)	
EC50 - Crustacea [1]	> 1000 mg/l

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts (68442-22-8)	
LC50 - Fish [1]	46 mg/l Test organisms (species): Cyprinodon variegatus
EC50 - Crustacea [1]	23 mg/l
EC50 72h - Algae [1]	24 mg/l
NOEC chronic crustacea	0.4 mg/l

12.2. Persistence and degradability

2037, 22246 Pro-Line Engine Flush	
Persistence and degradability	No additional information available.

Distallates (petroleum), hydrotreated light (64742-47-8)	
Persistence and degradability	Inherently biodegradable.
Biodegradation	85 % OECD 301F (28d)

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts (68442-22-8)	
Persistence and degradability	Not readily biodegradable.

Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6)	
Persistence and degradability	Rapidly degradable

Highly refined mineral oil (C15-C50) (Proprietary)	
Persistence and degradability	No additional information available.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

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			
UN1268	Not regulated	Not applicable	Not applicable

DOT	TDG	IMDG	IATA
14.2. Proper Shipping Name			
Petroleum distillates, n.o.s.	Not regulated	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Combustible liquid	Not regulated	Not applicable	Not applicable
14.4. Packing group			
III	Not regulated	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Not regulated	Not applicable	Not applicable
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. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN1268

DOT Special Provisions (49 CFR 172.102) : 144 - If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter.
B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

TDG
Not regulated

IMDG
Not applicable

IATA
Not applicable

SECTION 15 Regulatory information

15.1. Federal regulations

2037, 22246 Pro-Line Engine Flush	
SARA Section 311/312 Hazard Classes	Refer to Section 2 for OSHA Hazard Classification.

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

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

Listed on the Canadian DSL (Domestic Substances List)

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts (68442-22-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

2037, 22246 Pro-Line Engine Flush

Listed on the Canadian DSL (Domestic Substances List)

Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts (722503-68-6)

Listed on the Canadian DSL (Domestic Substances List)

15.3. State regulations

WARNING: This product can expose you to 2-Ethylhexyl acrylate, 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 (HCS 2024) and the Hazardous Products Regulation (WHMIS 2015 rev 2022)
Revision date : 6/17/2025

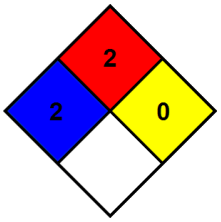
Data sources : This safety data sheet was compiled with data and information from the following sources : ECHA, ECOSAR, HSDB, SIDS SIAP, CESAR, Chemical DB.

Full text of hazard classes and H-statements	
H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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

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.