PENETRATING OIL **8472-AEROSOL**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Penetrating Oil **SDS Code:** 8472-Aerosol

Related Part # 8472-450G

Recommended Use and Restriction on Use

Use: All purpose lubricant, cleaner

Uses Advised Against: Not available

Details of Manufacturer or Importer

Manufacturer
MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

☎ +1-800-340-0772
FAX +1-800-340-0773
E-MAIL support@mgchemicals.com
WEB www.mgchemicals.com

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

☎ +1-905-331-1396
FAX +1-905-331-2682
E-MAIL info@mgchemicals.com

E-MAIL (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY—leaks, spills, fires, exposures or accidents
USA or CANADA: Call CHEMTREC ☎: ***+1-800-424-9300***

For emergencies involving dangerous goods; Collect 24/7
CANADA: Call CANUTEC ☎: ***+1-613-996-6666*** or ****666*** on cellular phones

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria		Category	Signal Word	Pictograms
Aspiration Hazard		1	Danger	Health
Carcinogenicity		2	Warning	Health
Specific target organ toxicity	Repeated exposure	2	Warning	Health
Flammable Aerosol		2	Warning	Flame
Gas under pressure	Liquefied gas	Liquefied gas	Warning	Gas Cylinder
Sensitization	Skin sensitizer	1	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Specific target organ toxicity	Single exposure	3	Warning	Exclamation
Environmental Hazard	Chronic Aqua. Tox	2	*none*	Environment

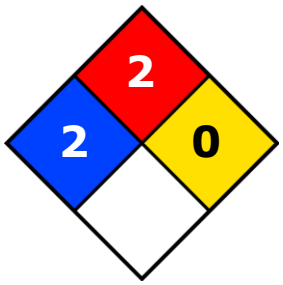
Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Other Classifications

HMIS® RATING

HEALTH:	* 2
FLAMMABILITY:	2
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Continued on the next page

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H304: May be fatal if swallowed and enters airways H373: May cause damage to organs (thymus, liver, bone marrow) through prolonged or repeated exposure. H351: Suspected of causing cancer.
	H223: Flammable aerosol
	H229: Pressurized container: may burst if heated
	H315: Causes skin irritation H317: May cause an allergic skin reaction H336: May cause dizziness or drowsiness
Symbole non mandaté	H411: Toxic to aquatic life with long lasting effects.
Prevention	**Precautionary Statements**
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, flames, and other ignition sources. No Smoking.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260 + P271	Do not breathe mist/vapors/spray. Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.

Continued on the next page

Continued…

Prevention	**Precautionary Statements**
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
Response	**Precautionary Statements**
P301 + P310, P331	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty water.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and with it before reuse.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.
Storage	**Precautionary Statements**
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F].
P403	Store in well-ventilated place.
P405	Store locked up.
Disposal	**Precautionary Statements**
P501	Dispose of contents/container in accordance to local/regional/international regulations.

Hazards Not Otherwise Classified

Not available

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	Wt%
64742-47-8	distillates (petroleum) hydrotreated light	26–31%
8042-47-5	white mineral oil (petroleum)	26–31%
811-97-2	1,1,1,2-tetrafluoroethane	25%
92045-24-4	Gas oils petroleum (hydrotreated light) vacuum	7%
57855-77-3	Calcium alkylnaphthalenesulfonate	3–4%
68478-94-4	Poly(oxy-1,2-ethanediyl), a,a'-[[[3-(decyloxy)propyl]methyliminio]di-2,1-ethanediyl]bis[w-hydroxy-, branched, chlorides	0.6%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statements*
IF SWALLOWED	P301 + P310, P331
Immediate Symptoms	*nausea, sore throat, diarrhea, drowsiness*
Response	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	*drowsiness, dizziness, headaches, nausea, unconsciousness*
Response	Remove person to fresh air (out of the contaminated zone) and keep comfortable for breathing. If you feel unwell: Call a POISON CENTRE/doctor. IF exposed or concerned: Get medical advice/attention.
IF ON SKIN	P302 + P352, P314, P333 + P313, P362 + P364
Immediate Symptoms	*redness, irritation*
Response	IF ON SKIN: Wash with plenty of water. Get medical advice/attention if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and with it before reuse.
IF IN EYES	P305 + P351 + P338
Immediate Symptoms	*redness*
Response	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Section 5: Fire-Fighting Measures

Auto-ignition Temperature a)	≥216 °C [421 °F]	**Flash Point** a)	>66 °C [150 °F]	**LFL [LEL]**	0.6% (v)
				UFL [UEL] b)	10% (v)

In case of fire	P370 + P378
Extinguishing Media	Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.
Specific Hazards	Aerosols containers may erupt with force at temperatures above 50 °C [122 °F]. Produces irritating and toxic fumes in fires or in contact with hot surfaces. The vapors are heavier than air and may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion.
Combustion Products	Produces carbon oxides (CO,CO_2), halogenated compounds, and hydrogen fluorides, and sulfur oxides (SO_2).
Fire-Fighter	Wear self-contained breathing apparatus for fire fighting

a) Values based on the mixture of distillates (petroleum) hydrotreated light, which is the component with the lowest value.
b) LFL = Lower Flammability [or Explosion] Limit (in volume %);
UFL = Upper Flammability [or Explosion] Limit (in volume %)

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Do not breathe the mist/spray/vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment Methods	Not applicable
Cleaning Methods	Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash spill area with soap and water to remove the last traces of residue.
Disposal Methods	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention

Keep out of reach of children.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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

Do not spray on open flame or other ignition source.

Do not pierce or burn, even after use.

Do not breathe mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Do not eat, drink, or smoke when using this product.

Handling

Wear protective gloves/clothing/eye protection.

Take off contaminated clothing and wash it before reuse.

Wash hands thoroughly after handling.

Avoid release to the environment.

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F]. Store in well ventilated place.

Store locked up.

Section 8: Exposure Controls/Personal Protection

Routes of Entry

ingestion, inhalation, and skin

Substances with Occupational Exposure Limit Values

Chemical Name	Country/Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
distillate (petroleum) hydrotreated light (aerosol)	ACGIH	200 mg/m^3	Not established
	U.S.A. OSHA PEL	Not established	Not established
	Canada AB	200 mg/m^3	Not established
	Canada BC	200 mg/m^3	Not established
	Canada ON	200 mg/m^3	Not established
	Canada QC	Not established	Not established

Continued on the next page

Continued…

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
white mineral oil (petroleum)	ACGIH	5 mg/m^3	(10 mg/m^3) [b]
	U.S.A. OSHA PEL	5 mg/m^3	Non établi
	U.S.A WEEL [a]	5 mg/m^3	10 mg/m^3
	Canada AB	5 mg/m^3	10 mg/m^3
	Canada BC [c]	1 mg/m^3	Non établi
	Canada ON	5 mg/m^3	10 mg/m^3
	Canada QC	5 mg/m^3	10 mg/m^3
Gas oils petroleum (hydrotreated light) vacuum	ACGIH [d]	5 mg/m^3	10 mg/m^3
	U.S.A. OSHA PEL	Non établi	Non établi
	Canada AB	Non établi	Non établi
	Canada BC [c]	1 mg/m^3	Non établi
	Canada ON	Non établi	Non établi
	Canada QC	Non établi	Non établi
1,1,1,2-tetrafluoroethane	*MG Chemicals* [b]	1,000 ppm	Not established
	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	Not established	Not established
	Canada	Not established	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from by RTECS database[2] of the Canadian Centre for Occupational Health and Safety (CCOHS) a data from suppliers' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

a) Workplace Environmental Exposure Limit
b) MG Chemicals recommended limit.
c) Base on oil mist, severely refined value.
d) Value reported as a read across to the ACGIH mineral oil inhalable fraction. The supplier derived inhalation effects are 68 mg/m^3 for long term and 4300 mg/m^3 for short term.

Engineering Controls

Ventilation Keep airborne concentrations below the occupational exposure limits (OEL).

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.

Recommendation: Ensure that glasses have side shields for lateral protection.

Skin Protection For likely contacts, use of protective nitrile gloves or other chemically resistant gloves.

For incidental contacts, use nitrile, neoprene, PVC gloves, or other chemically resistant gloves.

Continued on the next page

Respiratory Protection For over-exposures up to 10 x OEL of mist/vapors/spray, wear respirator such as a half-mask respirator with organic vapor cartridges resistant to oils.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

RECOMMENDATION: Consult your local safety supply store to ensure your respirator has filter cartridges appropriate for the ingredients listed in section 3 of this SDS, and that the respirator is fitted to the employee by a professional.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

Section 9: Physical and Chemical Properties

Physical State	Liquid, in aerosol format	**Lower Flammability Limit**	0.6%
Appearance	Transparent, yellow/orange	**Upper Flammability Limit**	10.0%
Odor	Slight hydrocarbon	**Vapor Pressure @20 °C** a)	< 0.013 hPa [<0.010 mmHg]
Odor Threshold	Not available	**Vapor Density**	~5 (Air =1)
pH	Not available	**Specific Gravity @25 °C**	0.83
Freezing/Melting Point	Not available	**Solubility in Water**	Insoluble
Boiling Point	≥228 °C [≥442 °F]	**Partition Coefficient**	Not available
Flash Point a)	>66 °C [>150 °F]	**Auto-ignition Temperature** a)	≥216 °C [≥421 °F]
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability (solid, gas)	Not available	**Viscosity @40 °C**	<20.5 mm^2/s

a) Values based on the mixture of distillates (petroleum) hydrotreated light, which is the component with the lowest value.

Section 10: Stability and Reactivity

Reactivity	Not available.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Temperatures above 50 °C [122 °F], open flames, and incompatible substances
Incompatibilities	Oxidizing agents, strong acids, strong bases, alkali, alkali metals, peroxides, halogens, vinyl chloride, and iodine pentafluoride
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5

Section 11: Toxicological Information

Routes of Exposure

Ingestion, inhalation, and skin

Symptoms Summary

Eyes	May cause redness
Skin	May cause skin redness, irritation, and dry skin.
Inhalation	May cause drowsiness, dizziness, headaches, nausea, unconsciousness
Ingestion	May cause nausea, sore throat, and diarrhea (see inhalation symptoms)
Chronic	Prolonged or repeated exposure may cause skin dryness and cracking, defat skin. Long term exposure may lead to allergic skin reaction in some individuals.

Continued on the next page

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
distillates (petroleum) hydrotreated light	>8 000 mg/kg Rat	>4 000 mg/kg Rabbit	>2 500 ppm 4 h Rat
white mineral oil (petroleum)	>5 000 mg/kg Rat	Not available	Not available
1,1,1,2-tetrafluoroethane	Not available	Not available	1 500 g/m^3 4 h Rat
Gas oils petroleum (hydrotreated light) vacuum	>5 000 mg/kg Rat	>2 000 mg/kg Rabbit	Not available
Calcium alkylnaphthalenesulfonate	2 000 mg/kg Rat	>20 g/kg Rabbit	>18 000 mg/m^3 1 h Rat
Poly(oxy-1,2-ethanediyl), a,a'-[[[3-(decyloxy)propyl] methyliminio]di-2,1-ethanediyl]bis[w-hydroxy-, branched, chlorides	Not available	Not available	Not available

Note: Representative toxicity data from by RTECS database of the Canadian Centre for Occupational Health and Safety (CCOHS)[2] data from supplier (M)SDS were also consulted.
a) Supplier MSDS

Other Toxicological Effects

Skin corrosion/irritation — Skin irritant

Serious eye damage/irritation — No classificiable effects known

Sensitization (allergic reactions) — Poly(oxy-1,2-ethanediyl), a,a'-[[[3-(decyloxy)propyl] methyliminio]di-2,1-ethanediyl]bis[w-hydroxy-, branched, chlorides is a skin sensitizer according to animal studies.

Carcinogenicity (risk of cancer) — None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.

The middle distillates of gas oils petroleum (hydrotreated light) vacuum have a weak carcinogenic potention as demonstrated by the low tumor yield and the long latent periods.

Mutagenicity (risk of heritable genetic effects)	No effects known
Reproductive Toxicity (risk to sex functions)	No effects known
Teratogenicity (risk of fetus malformation)	No effects known
STOT-single exposure	The hydrocarbon hydrotreate light is known to have narcotic effects by inhalation.
STOT-repeated exposure	Gas oils petroleum (hydrotreated light) vacuum may cause damage to the thymus, liver, and bone marrow through prolonged or repeated exposure.
Aspiration hazard	The liquid is content is classified as Cat 1 aspiration hazards. It is composed of petroleum, and the kinematic viscosity is <20.5 mm^2/s at 40 °C.

Section 12: Ecological Information

The IMDG Code criteria, the raw-material safety data sheets, and supporting data from the European Chemical Agency database (http://echa.europa.eu) were used to support the classification.

The distillate (petroleum) hydrotreated light and gas oils (petroleum), hydrotreated light vacuum components have a chronic aqueous toxicity of category 2.

Acute Ecotoxicity

Category 2

H401: Toxic to aquatic life

Chronic Ecotoxicity

Category 2

H411: Toxic to aquatic life with long lasting effects.

Avoid release ot the environment. Collect spillage.

Biodegradability

Expected to be inherently biodegrable. The volatile constituents will oxidize rapidly in air by photochemical reaction.

Other Effects

Regulated Volatile Organic Compounds (VOC) content according to the US (EPA) and Canadian (CEPA) authorities.

VOC (CEPA) = 38% [317 g/L]

VOC (EPA) = 78% [592 g/L]

VOC with low vapor pressure exemption (California & Canada) = 0.19% [1.6 g/L]

Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

Section 14: Transport Information

Ground

Refer to TDG (Canadian Transportation of Dangerous Goods regulations) and **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Limited Quantity

UN number: UN1950
Shipping Name:
AEROSOLS, flammable
Class: 2.1
Packing Group: Not applicable
Marine Pollutant: Yes

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Limited Quantity

UN number: UN1950
Shipping Name:
AEROSOLS, flammable
Class: 2.1
Packing Group: Not applicable
Marine Pollutant: Yes

Sea

Refer to IMDG regulations.

Limited Quantity

UN number: UN1950
Shipping Name:
AEROSOLS, flammable
Class: 2.1
Packing Group: Not applicable
Marine Pollutant: Yes

Note: **Shipper must be appropriately <u>trained and certified</u> before involvement with the transport of dangerous goods.**

Section 15: Regulatory Information

Canada

WHMIS Classification

A – Aerosol Container—Liquide; B5 – Flammable Aerosols;
D2B – Toxic Other (skin irritant, skin sensitizer)

Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

USA

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain ingredients that have a reporting quantity requirements in section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, Sept 2, 2011 revision, USA).

This product does not contain any listed substances in California.

Continued on the next page

Europe

RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by Michel Hachey

Date of Review 02 October 2014

Supersedes 15 July 2011

Reason for Changes: Change to GHS format in compliance with HCS 2012 and WHMIS.

Reference

1) ACGIH *2013 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices*, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2013).

2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
NOELR	No observable effect loading ratio
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

Continued on the next page

Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

Email: support@mgchemicals.com

Mailing Addresses

Manufacturing & Support
1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Head Office
9347–193rd Street
Surrey, British Columbia, Canada
V4N 4E7

Disclaimer This material safety data sheet is provided as an information resource only. *M.G. Chemicals, Ltd.* believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to query and verify any information seeming suspect where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, regional, national, and international regulations.