Diesel Engine Flush

SECTION 1. IDENTIFICATION

Product Identifier	Diesel Engine Flush
Part number	PLI-023
Product Family	Mixture
Recommended Use	Internal engine cleaner.
Restrictions on Use	None known.
Supplier Identifier	Performa Lubricants International, Inc., 42 Montrose Crescent, Whitby, ON, L1R 1C5, 905.668.1440 1.800.808.3062
Emergency Phone No.	CANUTEC, +1.613.996.6666, Operation hours: 24/7

SECTION 2. HAZARD IDENTIFICATION

Classification

Flammable liquid - Category 3; Skin irritation - Category 2; Eye irritation - Category 2A; Carcinogenicity - Category 1A; Aspiration hazard - Category 1

Label Elements

Danger

Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash hands and skin thoroughly after handling.
Wear protective gloves/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use carbon dioxide or dry chemical to extinguish.

Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Lubricating oils (petroleum), hydrotreated spent	64742-58-1	30-60	
Stoddard solvent	8052-41-3	15-40	
n-Nonane	111-84-2	1-5	
Dipropylene glycol monomethyl ether	34590-94-8	1-5	
1,2,4-Trimethylbenzene	95-63-6	1-5	
Ethylbenzene	100-41-4	0.1-1.0	
Xylene (mixed isomers)	1330-20-7	0.1-1.0	
Naphthalene	91-20-3	0.1-1.0	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing has stopped, trained personnel should begin rescue breathing. Get medical attention immediately.

Skin Contact

Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists, get medical advice or attention.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again. Drink two glasses of water. Immediately call a Poison Centre or doctor.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Small fire: carbon dioxide or dry chemical. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

Do not use a direct stream of water.

Specific Hazards Arising from the Product

Vapours are heavier than air. May travel a considerable distance to a source of ignition and flash back to a leak or open container. Combustible liquid. Can ignite if heated. Releases vapour that can form explosive mixture with air at or above the flash point.
Carbon oxides, and other unidentified organic compounds.

Special Protective Equipment and Precautions for Fire-fighters

See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Caution! spilled material is slippery. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Contaminated absorbent poses the same hazard as the spilled product.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Avoid generating vapours or mists. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Do NOT smoke in work areas. Containers of this material may contain hazardous residues when "emptied". Do not weld, cut or perform hot work on empty container until all traces of product have been removed.

Conditions for Safe Storage

Store at temperatures not exceeding: 35°C. Store in a closed container. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet. Keep away from children, out of direct sunlight and away from heat and ignition sources.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH® TLV®		OSHA PEL	
Chemical Name	**TWA**	**STEL [C]**	**TWA**	**Ceiling**
Ethylbenzene	20 ppm A3	Not established	100 ppm	Not established
n-Nonane	200 ppm	Not established	Not established	Not established
Xylene (mixed isomers)	100 ppm A4	150 ppm A4	435 mg/m3	Not established
Dipropylene glycol monomethyl ether	100 ppm Skin	150 ppm Skin		
Stoddard solvent	100 ppm	Not established	Not established	Not established
Naphthalene	10 ppm	15 ppm	10 ppm	Not established

1,2,4-Trimethylbenzene	25 ppm	Not established	Not established	Not established

Appropriate Engineering Controls

Sufficient mechanical ventilation to maintain exposures below the TLV. Under normal conditions of use, general ventilation should be satisfactory. Local ventilation is recommended if the product is misted or used in a confined space or if the TLV is exceeded. Make up air should always be supplied to balance air exhausted.
Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Safety glasses with side shields. Contact lenses should not be worn, they may contribute to the severity of the injury.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Neoprene rubber, polyvinyl chloride, nitrile rubber.

Respiratory Protection

Not normally required if product is used as directed. If the TLV is exceeded, a NIOSH -approved respirator is advised.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	liquid.
Odour	Hydrocarbon
Odour Threshold	Not available
pH	Not applicable
Melting Point/Freezing Point	Not available (melting)
Initial Boiling Point/Range	Not available
Flash Point	40 ºC (method not specified)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	> 1
Relative Density (water = 1)	0.83 at 15 ºC
Solubility	Negligible in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic)

Other Information

VOC %	Not applicable
Flame projection	Not applicable
NFPA Classification	Combustible liquid, Class II

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Hazardous polymerization will not occur.

Chemical Stability

Stable at ambient temperatures and pressures.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Incompatible materials.

Incompatible Materials

Increased risk of fire and explosion on contact with: strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Carbon oxides. And other unidentified organic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

Reports have associated repeated and prolonged occupational overexposure to various organic solvents with internal organ, brain and nervous system damage.
Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation.
Prolonged or repeated exposure can result in drying of the skin, irritation and dermatitis.
Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis).

Likely Routes of Exposure

Inhalation.
Skin contact.
Eye contact.
Ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ethylbenzene	~ 4000 ppm (rat) (4-hour exposure)	3500 mg/kg (rat)	15380 mg/kg (rabbit)
n-Nonane	3200 ppm (rat) (4-hour exposure)	> 15000 mg/kg (rat)	Not available
Xylene (mixed isomers)	6350 ppm (male rat) (4-hour exposure)	3523 mg/kg (rat)	> 1700 mg/kg (rabbit)
Dipropylene glycol monomethyl ether	Not available	5120 mg/kg (rat)	9480 mg/kg (rabbit)
Stoddard solvent	> 5500 mg/m3 (rat) (4-hour exposure)	> 5000 mg/kg (rat)	> 3000 mg/kg (rabbit)
Naphthalene	141 ppm (rat) (4-hour exposure)	490 mg/kg (rat)	> 20000 mg/kg (rabbit)
1,2,4-Trimethylbenzene	18000 mg/m3 (rat) (4-hour exposure)	5000 mg/kg (rat)	Not available

Skin Corrosion/Irritation

Moderate skin irritant.

Serious Eye Damage/Irritation

There is limited evidence of mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

No hazard under normal conditions of use.

High concentrations may cause respiratory irritation and central nervous system depression with results ranging from dizziness and headache to unconsciousness.

Skin Absorption

No information was located.

Ingestion

Ingestion of small amounts during normal handling is not likely to cause injury. If large amounts are swallowed can cause effects as described for inhalation. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

May cause lung damage if aspirated based on physical properties (e.g. kinematic viscosity) and chemical family (hydrocarbon).

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer.
Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	ACGIH®	IARC	NTP	OSHA
Ethylbenzene	A3	Group 2B	Not Listed	Not Listed
Xylene (mixed isomers)	A4	Group 3	Not Listed	Not Listed
Dipropylene glycol monomethyl ether	Not Listed	Not evaluated	Not Listed	
Naphthalene	A4	Group 2B	Reasonably anticipated	Not Listed

Reproductive Toxicity

Development of Offspring

Contains a component that contains xylene, which is reported to be fetotoxic.

No information was located for: Sexual Function and Fertility, Effects on or via Lactation, Germ Cell Mutagenicity, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS.
This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of in accordance with municipal, provincial/state or federal regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1268	Petroleum products, n.o.s.	3	III
IATA (Air)	UN1268	Petroleum products, n.o.s.	3	III
IMDG (Marine)	UN1268	Petroleum products, n.o.s.	3	III

Special Precautions Please note: Flash point 40°C

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Emergency Response Guide No.	128 EmS F-E, S-E
Other Information	ICAO/IATA PI Y344/355/366 Product may ship as LTD QTY if TDG, ICAO/IATA or IMDG Limited Quantity provisions are met.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

CEPA - National Pollutant Release Inventory (NPRI)

(Ethylbenzene) Part 1A.
(Xylene (mixed isomers)) Part 1A.
(Stoddard solvent) Part 5.
(Naphthalene) Part 1A.
(1,2,4-Trimethylbenzene) Part 1A.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

CERCLA. (Ethylbenzene). (Xylene (mixed isomers)). (Naphthalene)
California Proposition 65: Not applicable.
SARA Title III - Section 302: Not applicable.
SARA Title III - Section 313. (Ethylbenzene). (Xylene (mixed isomers)). (Naphthalene). (1,2,4-Trimethylbenzene)
Massachusetts Right To Know:
New Jersey Right To Know. (Ethylbenzene). (n-Nonane). (Xylene (mixed isomers)). (Dipropylene glycol monomethyl ether). (Stoddard solvent). (1,2,4-Trimethylbenzene)
Pennsylvania Right To Know. (Ethylbenzene). (n-Nonane). (Xylene (mixed isomers)). (Dipropylene glycol monomethyl ether). (Stoddard solvent). (1,2,4-Trimethylbenzene)

SECTION 16. OTHER INFORMATION

NFPA Rating	**Health - 2** **Flammability - 2** **Instability - 0** **Based on** Stoddard solvent
SDS Prepared By	Regulatory Compliance
Phone No.	800.201.9486
Date of Preparation	March 07, 2016
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists CANUTEC = Canadian Transportation Emergency Centre CAS = Chemical Abstract Services CCOHS = Canadian Centre for Occupational Health & Safety CNS = Central nervous system GESTIS Substance Database HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer ICAO = International Civil Aviation Organization IMDG = International Maritime Dangerous Goods Code LC = Lethal concentration LD = Lethal dose NFPA = National Fire Prevention Association NIOSH = National Institute for Occupational Safety and Health

NTP = National Toxicology Program
OSHA = US Occupational Safety and Health Administration
PPM = Parts per million
RTECS® = Registry of Toxic Effects of Chemical Substances
STEL = Short term exposure limit
TDG = Transportation of Dangerous Goods Regulations (Canada)
TWA = Time weighted average

References

Material Safety Data Sheet from manufacturer.
CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS).
Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
ECHA - European Chemical Agency, Classification and Labelling Inventory
GESTIS Substance Database
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015.

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