

MANUFACTURER'S NOTE

The DROPSA MONO is an "Article" rather than a substance, preparation or mixture and a Safety Data Sheet is not required under the EC's REACH or CHIP Regulations. However, for the benefit of users, the following safety information is provided in a similar layout to that laid down for Safety Data Sheets.

A DROPSA MONO is an automatic lubricator that is designed to screw into a grease nipple socket or other lubrication point and discharge its content of 120 ml of grease or oil in a controlled continuous flow for a user-selected period of up to 12 months. Built into the top of the DROPSA MONO is a flexible rubber expansion chamber containing a small amount of a mildly acidic electrolyte (a dilute solution of citric acid and glycine in water) and adjustable molybdenum: zinc galvanic element. By manipulation of the control knob on the top of the unit, the user can adjust the configuration of the galvanic element to give the desired discharge duration and then inject the galvanic element into the electrolyte. The resultant electro-chemical reaction generates a small but steadily increasing amount of hydrogen gas which gradually expands against a piston to inject the lubricant into the bearing to which the DROPSA MONO is fitted. The chemicals and the gas remain hermetically sealed within the expansion chamber so that none can contaminate the lubricant. Only if the casing of the DROPSA MONO is fractured by severe mechanical damage can the gas or chemicals escape. In the event of a complete blockage of the bearing's lubricant channel, the internal pressure in the DROPSA MONO will build up until the pressure relief valve in the base operates to release lubricant (but no gas or electrolyte), thus relieving the pressure and warning that no lubrication is taking place.

1. HAZARDS IDENTIFICATION

In the normal course of use of a DROPSA MONO, no hazard will arise because the reactive agents remain sealed inside it. The DROPSA MONO is of robust, tamper-resistant construction and users are warned not to make any attempt to force open the casing, whether the unit is inactivated, working or spent. However, should a GREASOMATIC become fractured as a result of severe accidental damage or deliberate interference, small amounts of the following preparations or substances may escape:

INACTIVATED DROPSA MONO: up to 47 g of liquid electrolyte and up to 125 g of lubricant,

WORKING OR SPENT GREASOMATIC: up to 47 g of liquid electrolyte and up to 0.02 g of hydrogen gas and up to 125g of lubricant.

Such an escape will give rise to the following potential hazards (assessment of which should take into account the very small quantities of the substances involved and the unlikelihood of prolonged exposure to them)

ELECTROLYTE LIQUID: Not classified as hazardous under REACH, CHIP or EC regulations but bodily contact could have certain adverse effects.

CONTINUED OVERLEAF: EYE CONTACT: Could cause irritation.

SKIN CONTACT: Prolonged contact could cause irritation.

IDENTIFICATION (continued)

IDENTIFICATION (continued)

HYDROGEN GAS:

Hydrogen is lighter than air and highly flammable. However the risk of fire or explosion from the maximum of 0.02g of the gas which is sealed within a working or used GREASOMATIC 96 is not considered to constitute a serious hazard or health risk.

DROPSA MONO COMBUSTION:

A GREASOMATIC and its contents are not readily combustible but will burn if ignited in the course of some larger conflagration. Products of combustion are carbon, oxides of carbon, nitrogen, zinc and molybdenum and thermal decomposition products of the plastic components.

LUBRICANT CONTENT:

For all safety information, see separate Safety Data Sheet provided.

2. COMPOSITION

See information on general construction provided overleaf.

3. FIRST AID MEASURES

ELECTROLYTE EYE CONTACT:

Irrigate with copious water. If irritation persists, obtain medical help.

ELECTROLYTE SKIN CONTACT:

Wash with soap and water.

4. FIRE FIGHTING MEASURES

EXTINGUISHERS: Use carbon dioxide, dry powder, foam, sand or earth.

5. ACCIDENTAL RELEASE MEASURES

ELECTROLYTE SPILLAGE:

Soak up with absorbent material and dispose of via a licensed waste disposal site.
Do not put into drainage systems.

6. HANDLING & STORAGE

Store at 0 - 40°C in dry conditions. Keep away from heat and flames.

7. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Do not attempt to force open the casing of a DROPSA MONO, whether inactivated, working or spent. If handling an accidentally fractured DROPSA MONO, keep it away from naked flames and avoid eye or skin contact with electrolyte.

8. PHYSICAL & CHEMICAL PROPERTIES

Do not attempt to force open the casing of a DROPSA MONO, whether inactivated, working or spent. If handling an accidentally fractured DROPSA MONO, keep it away from naked flames and avoid eye or skin contact with electrolyte.

11. TOXICOLOGICAL INFORMATION

ELECTROLYTE: No known effects.

LUBRICANT: See separate Safety Data Sheet provided.

12. ECOLOGICAL INFORMATION

DROPSA MONO: No data.

13. DISPOSAL CONSIDERATIONS

A spent DROPSA MONO should be considered as general industrial waste and disposed of via a licensed waste disposal site, preferably landfill. Due to its sealed construction and variety of components it is not suitable for recycling. The DROPSA MONO is below thresholds for designation as a hazardous waste under the Special Waste Regulations 1996 (SI No.972). However, where significant numbers of units are sent for disposal, the local office of the Environment Agency should be consulted. A spent DROPSA MONO is typically composed of: 124g of mixed rubber and plastic components; 47g of citric acid, citrates and glycine in water; 0.02 g of H₂; <1g of Zn; 200mg of Mo; 50mg of BeCu; 10 mg of Sn; <1mg of Hg; a variable amount of lubricant.

14. TRANSPORT INFORMATION

No special labelling required under CHIP and EC regulations.

15. REGULATORY INFORMATION

Not classified under CHIP or EC regulations. Disposal of controlled waste is governed by the Environmental Protection Act 1990.

16. OTHER INFORMATION

The DROPSA MONO is safe to use in hazardous environments as it contains no electrical equipment or other sources of ignition. It has CERBERUS Approval for use in underground mines based on the former British Coal Acceptance Scheme.

SECTION 1. IDENTIFICATION

Product name	: PEERLESS ^{TM/MC} OG2
Product code	: PLOG2I30, PLOG2P17, PLOG2KGL, PLOG2DRL, PLOG2, PLOG2C30
Manufacturer or supplier's details	Petro-Canada Lubricants Inc. 2310 Lakeshore Road West Mississauga ON L5J 1K2 Canada
Emergency telephone number	Petro-Canada Lubricants Inc.: +1 905-403-5770; CHEMTREC Transport Emergency: 1-800-424-9300; Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use	: Peerless OG Greases are calcium sulfonate thickened greases designed for high temperature multipurpose automotive and industrial applications such as chassis, bearings, and oven conveyors.
Prepared by	: Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Semi-solid.
Colour	Cream-white
Odour	Mild petroleum oil like.

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condition : None known.

Other hazards

None known.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
Sulfonic acids, petroleum, calcium salts	61789-86-4	5 - 10 %
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	5 - 10 %
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0	5 - 10 %
calcium dodecylbenzenesulphonate	26264-06-2	1 - 5 %

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary. Seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.
In the event of a known, or potential, high pressure injection injury, worker should obtain immediate medical evaluation.

In case of eye contact	: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
If swallowed	: Rinse mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Seek medical advice.
Most important symptoms and effects, both acute and delayed	: First aider needs to protect himself.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: No information available.
Specific hazards during fire-fighting	: Cool closed containers exposed to fire with water spray.
Hazardous combustion products	: Carbon oxides (CO, CO ₂), sulphur oxides (SO _x), calcium oxides (CaO _x), smoke and irritating vapours as products of incomplete combustion.
Further information	: Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.
Environmental precautions	: Do not allow uncontrolled discharge of product into the environment.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation. Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory

equipment.
Avoid contact with skin, eyes and clothing. Do not ingest.
Keep away from heat and sources of ignition. Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sun-light.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
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.

Filter type : organic vapour filter

Hand protection

Material	: neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R).
Remarks	: 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.
Eye protection	: Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	: Wash contaminated clothing before re-use.
Hygiene measures	: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Semi-solid.
Colour	: Cream-white
Odour	: Mild petroleum oil like.
Odour Threshold	: No data available
pH	: No data available
Pour point	: < -8 °C (< 18 °F) Base Fluid Blend
Boiling point/boiling range	: No data available
Flash point	: 193 °C (379 °F) Method: Cleveland open cup Base Fluid Blend
Fire Point	: 220 °C (428 °F) Base Fluid Blend
Auto-Ignition Temperature	: No data available
Evaporation rate	: No data available
Flammability	: Low fire hazard. This material must be heated before ignition will occur.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	:

	No data available
Density	: 0.9938 kg/l (15 °C / 59 °F)
Solubility (ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: 73 cSt (40 °C / 104 °F) Base Fluid Blend 9.4 cSt (100 °C / 212 °F) Base Fluid Blend
Explosive properties	: Do not pressurise, cut, weld, braze, solder, drill, grind or ex-pose containers to heat or sources of ignition.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Hazardous polymerisation does not occur. Stable under normal conditions.
Conditions to avoid	: No data available
Incompatible materials	: Reactive with oxidising agents.
Hazardous decomposition products	: May release COx, SOx, CaOx, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Ingestion
Inhalation
Skin contact

Acute toxicity

Product:

Acute oral toxicity	: Remarks: No data available
Acute inhalation toxicity	: Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

CarcinogenicityNo data

available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The components of this product are reported in the following inventories:

DSL	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
TSCA	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
AICS	On the inventory, or in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory
ENCS	On the inventory, or in compliance with the inventory
KECI	On the inventory, or in compliance with the inventory
EINECS	On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

For Copy of SDS : Internet: lubricants.petro-canada.com/sds
Western Canada, telephone: 1-800-661-1199; fax: 1-800-378-4518
Ontario & Central Canada, telephone: 1-800-268-5850; fax: 1-800-201-6285
Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.