

SAFETY DATA SHEET

CITGO Lithoplex® PL 00



Section 1. Identification

GHS product identifier	: CITGO Lithoplex® PL 00
Synonyms	: Lubricating grease; CITGO® Material Code: 655539001
Material uses	: Grease
Code	: 655539001
MSDS #	: 655539001
Supplier's details	: CITGO Petroleum Corporation P.O. Box 4689 Houston, TX 77210 sdsvend@citgo.com
Emergency telephone number (with hours of operation)	: Technical Contact: (800) 248-4684 Medical Emergency: (832) 486-4700 CHEMTREC Emergency: (800) 424-9300 (United States Only)

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: AQUATIC HAZARD (LONG-TERM) - Category 4
<u>GHS label elements</u>	
Signal word	: Warning
Hazard statements	: May cause long lasting harmful effects to aquatic life. Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
<u>Precautionary statements</u>	
General	: Avoid contact with eyes, skin and clothing. Thoroughly wash exposed areas and clothing with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. IF SWALLOWED: Do not induce vomiting. If you feel unwell, seek medical attention and show the label when possible. Keep out of reach of children.
Prevention	: Avoid release to the environment.
Response	: Not applicable.
Storage	: Store in a dry place and/or in closed container. Store in accordance with all local, regional, national and international regulations.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: Injection of petroleum hydrocarbons requires immediate medical attention.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Lubricating grease; CITGO® Material Code: 655539001
<u>CAS number/other identifiers</u>	
CAS number	: Not applicable.

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Residual oils (petroleum), solvent-dewaxed	≥25 - ≤50	64742-62-7
Distillates (petroleum), hydrotreated heavy naphthenic	≥25 - ≤50	64742-52-5
Residual oils (petroleum), solvent deasphalted	≥10 - ≤25	64741-95-3
Distillates (petroleum), hydrotreated heavy paraffinic	≥10 - ≤25	64742-54-7
Lithium, 12-hydroxyoctadecanoate sebacate complexes	≤3	68815-49-6
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	≤3	68649-42-3

Any concentration shown as a range is to protect confidentiality or is due to process variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** :
- Inhalation** : It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe.
- Skin contact** :
- Ingestion** : Get medical attention if adverse health effects persist or are severe.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.
- Specific treatments** : Treat symptomatically and supportively.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : This material may cause long lasting harmful effects to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** :

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** :
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** :
- Large spill** : Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Avoid release to the environment.
- Advice on general occupational hygiene** : Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. See Section 10 for incompatible materials before handling or use.

Bulk Storage Conditions:

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Residual oils (petroleum), solvent-dewaxed	ACGIH TLV (United States, 6/2013). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 4/2013). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours.
Distillates (petroleum), hydrotreated heavy naphthenic	ACGIH TLV (United States, 3/2017). TWA: 5 mg/m ³ 8 hours. Form: Inhalable

Section 8. Exposure controls/personal protection

Residual oils (petroleum), solvent deasphalted	fraction NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours.
Distillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV (United States, 3/2017). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours.
Lithium, 12-hydroxyoctadecanoate sebacate complexes	ACGIH TLV (United States, 3/2017). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours. ACGIH TLV (United States). TWA: 10 mg/m ³ 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, vapor controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** :
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Avoid inhalation of gases, vapors, mists or dusts.

Section 9. Physical and chemical properties

Appearance

Physical state	: Solid. [Semi-solid to solid]
Color	: Green.
Odor	: Mild petroleum odor
pH	: Not available.
Boiling point	: Not available.
Flash point	: Open cup: >150°C (>302°F) [Estimated]
Evaporation rate	: <1 (n-butyl acetate. = 1)
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: <0.0013 kPa (<0.01 mm Hg) [room temperature]
Vapor density	: >10 [Air = 1]
Relative density	: 0.91
Density lbs/gal	: 7.58 lbs/gal
Density gm/cm³	: Not available.
Gravity, °API	: Estimated 24 @ 60 F
Solubility	: Insoluble in the following materials: cold water.
Flow time (ISO 2431)	: Not available.
NLGI Grade	: 0

Section 10. Stability and reactivity

Reactivity	: Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), hydrotreated heavy paraffinic	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	2890 mg/kg	-

Conclusion/Summary :

Section 11. Toxicological information

Distillates (petroleum), hydrotreated heavy naphthenic: Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.

Distillates (petroleum), hydrotreated heavy paraffinic: Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts: INHALATION (LC50), Acute: > 1310 mg/L (Rat screen level)(4 hours).
 DRAIZE EYE, Acute: Moderate to severe eye irritant. (Rabbit).
 DRAIZE DERMAL, Acute: Mild to moderate skin irritant. (Rabbit).
 BUEHLER DERMAL, Acute: Non-sensitizing. (Guinea Pig).
 28-Day DERMAL, Sub-Chronic: Severe skin irritant. (Rabbit). Reported reduced food consumption resulting in weight loss and testicular atrophy.

Irritation/Corrosion

Not available.

Skin : No additional information.
Eyes : No additional information.
Respiratory : No additional information.

Sensitization

Not available.

Skin : No additional information.
Respiratory : No additional information.

Mutagenicity

Not available.

Conclusion/Summary : No additional information.

Carcinogenicity

Not available.

Conclusion/Summary : No additional information.

Reproductive toxicity

Not available.

Conclusion/Summary : No additional information.

Teratogenicity

Not available.

Conclusion/Summary : No additional information.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Long term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy naphthenic	-	-	Inherent

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Distillates (petroleum), hydrotreated heavy naphthenic	>6	-	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Oil: The product(s) represented by this SDS is (are) regulated as “oil” under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

- U.S. Federal regulations** :
- United States inventory (TSCA 8b)**: All components are listed or exempted.
 - Clean Water Act (CWA) 307**: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; naphthalene
 - Clean Water Act (CWA) 311**: naphthalene
- This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

SARA 302/304

Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Classification
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	≤3	ACUTE TOXICITY (dermal) - Category 4 EYE IRRITATION - Category 2A

SARA 313


	Product name	CAS number	%
Form R - Reporting requirements	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	<2
Supplier notification	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	<2

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: Polymer
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: Polymer; ZINC compounds
- Pennsylvania** : The following components are listed: Deashed Residuum; Polymer; ZINC COMPOUNDS

California Prop. 65 Clear and Reasonable Warnings (2018)

 **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.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
naphthalene	<0.001	Yes.	No.	Yes.	-

International regulations

Inventory list

- United States** : All components are listed or exempted.
- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Section 15. Regulatory information

Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Procedure used to derive the classification

Classification	Justification
AQUATIC HAZARD (LONG-TERM) - Category 4	Calculation method

History

Date of printing	: 12/7/2018
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Date of previous issue	: 5/10/2018
Version	: 3

Key to abbreviations

: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: IATA = International Air Transport Association
: IBC = Intermediate Bulk Container
: IMDG = International Maritime Dangerous Goods
: LogPow = logarithm of the octanol/water partition coefficient
: MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
: UN = United Nations

References

: Not available.

☑ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

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