SAFETY DATA SHEET

CITGO Lithoplex® CM-2 Grease

Section 1. Identification

GHS product identifier	: CITGO Lithoplex [®] CM-2 Grease
Synonyms	: Lubricating grease; CITGO [®] Material Code: 655352001
Material uses	: Lubricating grease
Code	: 655352001
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. Hazar	ds identification
OSHA/HCS status	• While this material is not considered bazardous by the OSHA Hazard Communication

OSHA/HCS status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	Not classified.
GHS label elements	
Signal word	: Warning
Hazard statements	Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
Precautionary statements	
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	Not applicable.
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	1	Mixture
Other means of identification	:	Lubricating grease; CITGO [®] Material Code: 655352001
CAS number/other identifiers		

CAS number	: Not applicable.

Date of issue/Date of revision	: 1/17/2020
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CITGO

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy naphthenic	≥50 - ≤75	64742-52-5
Distillates (petroleum), hydrotreated heavy paraffinic	≥10 - ≤25	64742-54-7
Residual oils (petroleum), solvent-dewaxed	≤10	64742-62-7
Lithium, 12-hydroxyoctadecanoate sebacate complexes	≤10	68815-49-6
molybdenum disulphide	≤5	1317-33-5
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	≤3	68649-42-3

* = Various ** = Mixture *** = Proprietary

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	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects Eye contact : No known significant effects or critical hazards. : No known significant effects or critical hazards. Inhalation **Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor. : No known significant effects or critical hazards. Ingestion **Over-exposure signs/symptoms Eve contact** : No specific data. Inhalation : No specific data. **Skin contact** : No specific data. : No specific data. Ingestion

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.

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.
Specific hazards arising from the chemical	: No specific fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides
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	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protect	tive equipment and emergency procedures
For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
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	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	ontainment and cleaning up
Small spill	 Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. 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	: Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Bulk Storage Conditions: Do not apply heat or flame to stockpiled material. Rotate stock to reduce the potential for hot spots. Do not store with oxidizers. Minimize dust creation by keeping material moist and/or covered.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy naphthenic	ACGIH TLV (United States, 3/2018). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist
Distillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV (United States, 3/2018). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist
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.
Lithium, 12-hydroxyoctadecanoate sebacate complexes	ACGIH TLV (United States). TWA: 10 mg/m ³ 8 hours.
molybdenum disulphide	ACGIH TLV (United States, 3/2018). TWA: 10 mg/m ³ , (as Mo) 8 hours. Form: Inhalable fraction TWA: 3 mg/m ³ , (as Mo) 8 hours. Form: Respirable fraction OSHA PEL (United States, 5/2018). TWA: 15 mg/m ³ , (as Mo) 8 hours. Form: Total dust

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							
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Section 8. Exposure controls/personal protection

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	: Chemical-resistant gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
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. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

Section 9. Physical and chemical properties

Ap	pe	ara	nce

Appearance		
Physical state	Solid. [Smooth and adhesive]	
Color	Gray.	
Odor	Mild petroleum odor	
рН	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	0.94	
Density Ibs/gal	Estimated 7.84 lbs/gal	
Density gm/cm ³	Not available.	
Gravity, °API	Estimated 19 @ 60 F	
Solubility	Insoluble in the following materials: cold water.	
Flow time (ISO 2431)	Not available.	
NLGI Grade	2	

Section 10. Stability and reactivity

Reactivity		cted to be Explosive, Self-F GHS Definition(s).	Reactive, Self-Heating	g, or an Organi	ic Peroxide	9
Chemical stability	: The produ	uct is stable.				
Possibility of hazardous reactions	: Under nor	rmal conditions of storage	and use, hazardous r	reactions will no	ot occur.	
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Section 10. Stability and reactivity

Conditions to avoid	1	No specific data.
Incompatible materials	:	No specific data.

Hazardous decomposition : 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), nydrotreated heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), nydrotreated heavy paraffinic	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
nolybdenum disulphide	LD Dermal	Rat	>2 g/kg	-
	LD Oral	Rat	>2 g/kg	-
	LD50 Oral	Rat	>6000 mg/kg	-
	LDLo Oral	Rat	6 g/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	: Distillates (petroleum), hydrot from highly refined oils are repo animals. Effects from single and of mineral oil mists well above a	rted to have low a d short-term repea	cute and sub-acute ated exposures to	e toxicities in high concentration

Not available.

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Skin	: molybdenum disulphide: May cause skin irritation.
Eyes	: molybdenum disulphide: May cause eye irritation.
Respiratory	: molybdenum disulphide: May cause respiratory irritation.
Sensitization	

Section 11. Toxicological information

Not available.

Skin Respiratory <u>Mutagenicity</u> Not available.	No additional information.No additional information.
Conclusion/Summary	: No additional information.
Carcinogenicity Not available.	
Conclusion/Summary Reproductive toxicity Not available.	: No additional information.
Conclusion/Summary <u>Teratogenicity</u> Not available.	: No additional information.
Conclusion/Summary	: No additional information.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
molybdenum disulphide	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	1	Routes of entry anticipated: Dermal.
Potential acute health effects		
Eye contact	1	No known significant effects or critical hazards.
Inhalation	1	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 effect	ts and also chronic effects from short and long term exposure
Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
<u>Long term exposure</u>	

Section 11. Toxicological information

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health eff	ects
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

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Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic	Acute EC50 >10000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100 mg/l Fresh water Acute NOEL >100 mg/l Fresh water	Fish - Pimephales promelas Algae - Pseudokirchneriella subcapitata	96 hours 72 hours

Persistence and degradability

Conclusion/Summary	: Not available.		
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy naphthenic	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Distillates (petroleum), hydrotreated heavy naphthenic	>6	-	high

<u>Mobility in soil</u>

 Soil/water partition coefficient (Koc)
 : 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

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

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.

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

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
	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.
<u>SARA 302/304</u>	
Composition/information o	n ingredients
SARA 304 RQ	: Not applicable.
<u>SARA 311/312</u>	
Classification	: Not applicable.
Composition/information o	n ingredients

Section 15. Regulatory information

Name	%	Classification
molybdenum disulphide		SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Phosphorodithioic acid, O,O-di- C1-14-alkyl esters, zinc salts		ACUTE TOXICITY (dermal) - Category 4 EYE IRRITATION - Category 2A

<u>SARA 313</u>

	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; MOLYBDENUM DISULFIDE	
New York	: None of the components are listed.	
New Jersey	: The following components are listed: Polymer; ZINC compounds	
Pennsylvania	: The following components are listed: Polymer; ZINC COMPOUNDS	
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): All components are listed or exempted. Japan inventory (ISHL): Not determined.	
Malaysia	: Not determined.	
New Zealand	: All components are listed or exempted.	
Philippines	: Not determined.	
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.)

Flammability				
Health 1 0	Instability/Reactivity			
	Special			

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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification		Justification
Not classified.		
History		
Date of printing	: 2/12/2021	
Date of issue/Date of revision	: 1/17/2020	
Date of previous issue	: 12/12/2019	
Version	: 3.01	
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 = International Air Transport Association IBC = 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

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