SAFETY DATA SHEET
CITGO Lithoplex® RT Grease No. 2

Section 1. Identification

GHS product identifier : CITGO Lithoplex® RT Grease No. 2
Synonyms : Lubricating grease; CITGO® Material Code: 655344001
Code : 655344001
MSDS # : 655344001

Supplier's details : CITGO Petroleum Corporation
                  P.O. Box 4689
                  Houston, TX 77210
                  sdsvend@citgo.com

Emergency telephone number : 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 : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms : ![Warning](image)

Signal word : Warning
Hazard statements : Causes serious eye irritation.
                    Injection under the skin can cause severe injury.
                    Most damage occurs in the first few hours.
                    Initial symptoms may be minimal.

Precautionary statements

General : Avoid contact with eyes, skin and clothing. May be harmful if swallowed. IF IN EYES: Rinse cautiously with water for several minutes. IF SWALLOWED: Do NOT induce vomiting. After handling, always wash hands thoroughly with soap and water. If you feel unwell, seek medical attention and show the label when possible. Keep out of reach of children.

Prevention : Wear eye or face protection. Wash hands thoroughly after handling.
Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
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.
Hazard not otherwise classified : Injection of petroleum hydrocarbons requires immediate medical attention.

Date of issue/Date of revision : 11/3/2014. Date of previous issue : No previous validation. Version : 1
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>Lubricating grease;</td>
</tr>
<tr>
<td></td>
<td>CITGO® Material Code: 655344001</td>
</tr>
</tbody>
</table>

CAS number/other identifiers

<table>
<thead>
<tr>
<th>CAS number</th>
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</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc compounds</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

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

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. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. 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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**

Wash out mouth with water. Remove dentures if any. 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. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute**

**Potential acute health effects**

**Eye contact**

Causes serious eye irritation.

**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**

Irritating to mouth, throat and stomach.

**Over-exposure signs/symptoms**

**Eye contact**

Adverse symptoms may include the following:

- pain or irritation
- watering
- redness

**Inhalation**

No specific data.

**Skin contact**

No specific data.

**Ingestion**

No specific data.

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

Date of issue/Date of revision: 11/3/2014. Date of previous issue: No previous validation. Version: 1.
Section 4. First aid measures

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

Specific hazards arising from the chemical: No specific fire or explosion hazard.

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

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: 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

Environmental precautions: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

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.

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: None identified.

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 glasses with side shields. 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. Chemical splash goggles. 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.

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.
Section 8. Exposure controls/personal protection

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: 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

Physical state: Solid. [Smooth texture]
Color: Red.
Odor: Petroleum.

pH: Not available.
Boiling point: Not available.
Flash point: Open cup: >150°C (>302°F) [Estimated]
Evaporation rate: <1 (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: 0.93
Density lbs/gal: Estimated 7.75 lbs/gal
Gravity, °API: Estimated 21 @ 60 F
Solubility: Insoluble in the following materials: cold water.

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

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Zinc and zinc compounds</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2890 mg/kg</td>
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</tr>
</tbody>
</table>

Conclusion/Summary: 

Date of issue/Date of revision: 11/3/2014. Date of previous issue: No previous validation. Version: 1.
### 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 lipid 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 lipid 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.

**Zinc and zinc compounds:** 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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymers</td>
<td>Respiratory - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Skin**
No additional information.

**Eyes**
No additional information.

**Respiratory**
No additional information.

### Sensitization

**Skin**
No additional information.

**Respiratory**
No additional information.

### Mutagenicity

**Conclusion/Summary**
No additional information.

### Carcinogenicity

**Conclusion/Summary**
No additional information.

### Reproductive toxicity

**Conclusion/Summary**
No additional information.

### Teratogenicity

**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.

### Information on the likely routes of exposure

**Potential acute health effects**

**Eye contact**
Causes serious eye irritation.

**Inhalation**
No known significant effects or critical hazards.
Section 11. Toxicological information

Skin contact: Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.

Ingestion: Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

Potential chronic health effects

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

Conclusion/Summary: Not available.

Persistence and degradability

Conclusion/Summary: Not available.

Bioaccumulative potential

Not available.

Mobility in soil

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. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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

<table>
<thead>
<tr>
<th></th>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>Not regulated.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>UN proper shipping name</td>
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<td>Transport hazard class(es)</td>
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<tr>
<td>Packing group</td>
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</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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 73/78 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: Zinc and zinc compounds

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: Immediate (acute) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
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</thead>
<tbody>
<tr>
<td>Zinc and zinc compounds</td>
<td>&lt;2</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
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</table>

SARA 313
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Form R - Reporting requirements</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
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<tr>
<td>Zinc Compounds</td>
<td>lead</td>
<td>7439-92-1</td>
<td>&lt;2</td>
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<tr>
<td>Supplier notification</td>
<td>Zinc Compounds</td>
<td>-</td>
<td>&lt;2</td>
</tr>
</tbody>
</table>

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: Zinc Compound; Polymer
- **Pennsylvania**: The following components are listed: Zinc Compound; Polymer

International regulations

- **Australia inventory (AICS)**: All components are listed or exempted.
- **China inventory (IECSC)**: All components are listed or exempted.
- **Japan inventory**: At least one component is not listed.
- **Korea inventory**: Not determined.
- **Malaysia Inventory (EHS Register)**: Not determined.
- **New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
- **Philippines inventory (PICCS)**: All components are listed or exempted.
- **Taiwan inventory (CSNN)**: Not determined.

International lists

- **Canada inventory**: All components are listed or exempted.
- **EU Inventory**: At least one component is not listed in EINECS but all such components are listed in ELINCS.
  - Please contact your supplier for information on the inventory status of this material.
- **WHMIS (Canada)**: Not controlled under WHMIS (Canada).

Section 16. Other information

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

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**History**

- **Date of issue/Date of revision**: 11/3/2014.
- **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 73/78 = International Convention for the Prevention of Pollution From Ships,
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