



CITGO Railroad 104-S Traction Gear Lube

Material Safety Data Sheet

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MSDS No. 655525001

Revision Date 09/23/1999

IMPORTANT: Read this MSDS before handling or disposing of this product and pass this information on to employees, customers and users of this product.

Emergency Overview

Physical State Semi-solid to solid. (buttery texture)
Color Dark gray to black **Odor** Mild Petroleum Odor

WARNING:

If stored or applied via high-pressure grease gun, a potential skin injection hazard may exist.
Injection under the skin can cause severe injury. Most damage occurs in the first few hours.
If heated, may cause thermal burns on contact.
This product can cause mild skin irritation and inflammation.
Spills may create a slipping hazard.

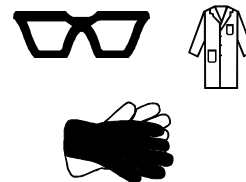
Hazard Rankings

	HMIS	NFPA
Health Hazard	1	1
Fire Hazard	1	1
Reactivity	0	0

* = Chronic Health Hazard

Protective Equipment

Minimum Requirements
See Section 8 for Details



SECTION 1: IDENTIFICATION

Trade Name	CITGO Railroad 104-S Traction Gear Lube	Technical Contact	(918) 495-5933
Product Number	655525001	Medical Emergency	(918) 495-4700
CAS Number	Mixture.	CHEMTREC Emergency	(800) 424-9300
Product Family	Lubricating Grease		
Synonyms	Lubricating Grease Former ILS Code: 55525; CITGO SAP Product Code No.: 655525001		

SECTION 2: COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
1) Distillates, petroleum, hydrotreated light naphthenic	64742-53-6	70 - 90
2) Proprietary Ingredients	Proprietary	1 - 15
3) Carbon	7440-44-0	1 - 15

SECTION 3: HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact. Eye Contact.

Signs and Symptoms of Acute Exposure

Inhalation No significant adverse health effects are expected to occur upon short-term exposure at ambient temperatures. If heated above its flash point, this product's vapors may cause respiratory tract irritation. Repeated or prolonged overexposure to product mists can result in respiratory tract inflammation and an increased risk of infection.

CITGO Railroad 104-S Traction Gear Lube

Eye Contact	This material can cause mild to moderate eye irritation from contact with product or product mists.
Skin Contact	This material can cause mild skin irritation from prolonged or repeated skin contact. Injection under the skin, in muscle, or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects and mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention.
Ingestion	If swallowed, no significant adverse health effects are anticipated. This material can cause a laxative effect. Ingestion of large quantities can cause intestinal obstruction. Contact with hot material may cause thermal burns.
Chronic Health Effects Summary	Contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Inhalation of petroleum-based mineral oils can cause respiratory irritation or other pulmonary effects after repeated or prolonged inhalation of oil mists at concentrations above applicable workplace exposure levels.
Conditions Aggravated by Exposure	Personnel with pre-existing skin disorders should avoid repeated or prolonged contact with this product.
Target Organs	Skin.
Carcinogenic Potential	This product does not contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC, or NTP.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification					
Irritant	☐	Toxic	☐	Combustible	☐	Explosive	☐	Pyrophoric	☐
Sensitizer	☐	Highly Toxic	☐	Flammable	☐	Oxidizer	☐	Water-reactive	☐
Corrosive	☐	Carcinogenic	☐	Compressed Gas	☐	Organic Peroxide	☐	Unstable	☐

SECTION 4: FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation	Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.
Eye Contact	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.
Skin Contact	Remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with soap and water. Seek medical attention if tissue appears damaged or if irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, into muscle, or into the bloodstream, seek medical attention immediately.
Ingestion	Do not induce vomiting unless directed to by a physician. Rinse out mouth with water. Never give anything by mouth to a person who is not fully conscious. Permit small quantities to pass through system. If large amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.
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.

SECTION 5: FIRE FIGHTING MEASURES

NFPA Flammability Classification	OSHA/NFPA Class-IIIB combustible liquid. Slightly combustible!		
Flash Point Method	OPEN CUP: GT 200°C (GT 392°F).		
Lower Flammable Limit	AP 1 %	Upper Flammable Limit	AP 7 %
Autoignition Temperature	Not available.		
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and nitrogen.		
Special Properties	Fight the fire from a safe distance in a protected location. Open any masses with a water stream to prevent reignition due to smoldering. Cool surface with water fog. Molten material can form flaming droplets if ignited. Water or foam can cause frothing. Use of water on product above 100° C (212° F) can cause product to expand with explosive force. Do not allow liquid runoff to enter sewers or public waters.		
Extinguishing Media	Use dry chemical, foam, Carbon Dioxide or water fog.		
Fire Fighting Protective Clothing	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.		

SECTION 6: ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

SECTION 7: HANDLING AND STORAGE

Handling	If this product is to be stored or applied via high-pressure grease guns or hydraulic lines, it might accidentally be injected into the eyes, skin, and/or underlying tissues. Hydrocarbon compounds injected into underlying tissues are not readily removed by body fluids and can cause pain, swelling, chemical irritation, and infection. Workers must be trained in the danger of this type of injury and should promptly seek special medical treatment if injected. Avoid water contamination and elevated temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.
Storage	Keep container closed. Do not store with strong oxidizing agents. Do not store at temperatures above 120° F or in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.
Personal Protective Equipment	Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



Eye Protection	Safety glasses equipped with side shields should be adequate protection under most conditions of use. Wear goggles and/or face shield if splashing or spraying is likely, especially if material is heated above 125°F (or 51°C). Have suitable eye wash water available.
Hand Protection	Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.
Body Protection	Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.
Respiratory Protection	Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
General Comments	Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents, or harsh abrasive skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
1) Distillates, petroleum, hydrotreated light naphthenic	TWA: 5 STEL: 10 (mg/M ³) from ACGIH (TLV) TWA: 5 (mg/M ³) from OSHA (PEL) TWA: 5 STEL: 10 (mg/M ³)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Semi-solid to solid. (buttery texture)	Color	Dark gray to black	Odor	Mild Petroleum Odor
Specific Gravity	0.97 (Water = 1)	pH	Not applicable.	Vapor Density	GT 1 (Air = 1)
Boiling Point/Range	GT 316°C (GT 600°F)		Melting/Freezing Point		Not available.
Vapor Pressure	Not applicable.		Viscosity (cSt @ 40°C)		Not available.
Solubility in Water	Insoluble in cold water.		Volatile Characteristics		Negligible volatility
Additional Properties	No additional information.				

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.		
Materials Incompatibility	Strong oxidizers.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

SECTION 11: TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Toxicity Data	Distillates, petroleum, hydrotreated light naphthenic:		
	ORAL (LD50):	Acute:	>5000 mg/kg [Rat].
	DERMAL (LD50):	Acute:	>2000 mg/kg [Rabbit].
	INHALATION (LC50):	Acute:	9.6 mg/L 8 hours [Rat]. 10.5 mg/L 8 hours [Rat, Male].
	Distillates, petroleum, hydrotreated light naphthenic:		
	INHALATION (LC50) Acute:		9.6 mg/L (Female Rat).
	INHALATION (LC50) Acute:		10.5 mg/L (Male Rat).
	ORAL (LD50) Acute:		GT 5,000 mg/kg (Rat screen level).
	DERMAL (LD50) Acute:		GT 2,000 mg/kg (Rabbit screen level).
	DRAIZE EYE Acute:		Non-irritating (Rabbit).
	DRAIZE DERMAL Acute:		Mild skin irritant (Rabbit).
	BUEHLER DERMAL Acute:		Non-sensitizing (Guinea Pig).
	28-Day DERMAL Sub-Chronic:		Mild to moderate skin irritant (Rabbit & Rat).

A life-time dermal application of severely hydrotreated light naphthenic oils produced skin masses on mice which correlated with the skin irritation response levels of the test animals. Additional studies attribute these masses to a weak promotional activity. These studies indicate that light naphthenic oils are not mutagenic, tumor initiators nor complete chemical carcinogens. These materials have not been determined to be carcinogenic by IARC, NTP or OSHA.

Carbon:

Repeated long-term overexposure to graphite (carbon) dust can cause pneumoconiosis. Short term overexposure to dusts can cause mechanical irritation to the eyes and skin. The release of graphite dust, however, from a lubrication oil or grease is remote.

Greases:

Injection of pressurized hydrocarbons under the skin, in muscle or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects, including mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Ecological effects testing has not been conducted on this material. Releases are expected to cause only localized non-persistent environmental damage.
Environmental Fate	Ecological effects testing has not been conducted on this product. However, plants and animals may experience harmful or fatal effects when coated with petroleum-based products. Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic environment.

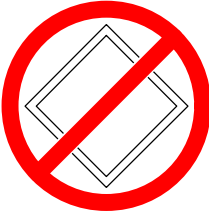
CITGO Railroad 104-S Traction Gear Lube

SECTION 13: DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

SECTION 14: TRANSPORT INFORMATION

DOT Status	Not a U.S. Department of Transportation regulated material.		
Proper Shipping Name	Petroleum products n.o.s.		
Hazard Class	Not a DOT controlled material (United States).	Packing Group(s)	Not available.
		UN/NA ID	Not applicable.
Reportable Quantity	A Reportable Quantity (RQ) has not been established for any components of this material.		
Placards		Emergency Response Guide No.	Not applicable.
		HAZMAT STCC No.	Not applicable.
		MARPOL III Status	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

SECTION 15: REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substance Control Act (TSCA) inventory.
SARA 302/304	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312	The Superfund Amendments and Reauthorization Act of 1989 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: No SARA 311/312 hazard categories identified.
SARA 313	This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.
CWA	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.

CITGO Railroad 104-S Traction Gear Lube

California Proposition 65	This product is not known to contain the any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.
New Jersey Right-to-Know Label	Grease
Additional Regulatory Remarks	No additional regulatory remarks.

SECTION 16: OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number	2.0
Revision Date	09/23/1999
Print Date	Printed on 04/24/2000.

ABBREVIATIONS

AP = Approximately Established	EQ = Equal	GT = Greater Than	LT = Less Than	NA = Not Applicable	ND = No Data	NE = Not
ACGIH = American Conference of Governmental Industrial Hygienists	AIHA = American Industrial Hygiene Association					
IARC = International Agency for Research on Cancer	NTP = National Toxicology Program					
NIOSH = National Institute of Occupational Safety and Health	OSHA = Occupational Safety and Health Administration					
NPCA = National Paint and Coating Manufacturers Association	HMIS = Hazardous Materials Information System					
NFPA = National Fire Protection Association	EPA = Environmental Protection Agency					

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