



Clarion® Food Machinery FR Fluid

Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 4689
Houston, TX 77210

MSDS No. 632503009
Revision Date 12/6/2010

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Hazard Rankings

| | HMIS | NFPA |
|---------------|------|------|
| Health Hazard | 0 | 0 |
| Fire Hazard | 0 | 0 |
| Reactivity | 0 | 0 |

* = Chronic Health Hazard

Emergency Overview

Physical State Liquid.
Color Colorless. **Odor** Mild.

WARNING:
Oil injected into the skin from high-pressure leaks can cause severe injury.
Most damage occurs during the first few hours.
Seek medical attention immediately.
Surgical removal of oil may be necessary.
Spills may create a slipping hazard.

Protective Equipment

Minimum Recommended
See Section 8 for Details



SECTION 1. PRODUCT IDENTIFICATION

| | | | |
|-----------------------|---|--|----------------|
| Trade Name | Clarion® Food Machinery FR Fluid | Technical Contact | (800) 248-4684 |
| Product Number | 632503009 | Medical Emergency | (832) 486-4700 |
| CAS Number | Mixture. | CHEMTREC Emergency (United States Only) | (800) 424-9300 |
| Product Family | Synthetic lubricant | | |
| Synonyms | Synthetic lubricant; Hydraulic fluids.; CITGO® Material Code: 632503009 | | |

SECTION 2. COMPOSITION

| Component Name(s) | CAS Registry No. | Concentration (%) |
|-------------------------|---------------------|-------------------|
| Propylene Glycol | 57-55-6 | <50 |
| Polyalkylene Glycol | Proprietary | <15 |
| Carboxylic Acid | Proprietary | <3 |
| Proprietary Ingredients | Proprietary Mixture | <1 |

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.

Signs and Symptoms of Acute Exposure

Inhalation At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs.

Eye Contact Minimal eye irritation may result from short-term contact with liquid, mist, and/or vapor.

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| Skin Contact | Prolonged skin contact is not expected to cause irritation. Repeated contact may cause flaking and softening of the skin. |
| Ingestion | If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage. |
| Chronic Health Effects Summary | Repeated excessive exposure to propylene glycol has been associated with central nervous system effects. |
| Conditions Aggravated by Exposure | Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin |
| Target Organs | May cause damage to the following organs: skin, central nervous system (CNS). |
| Carcinogenic Potential | This product is not known to 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 <input type="checkbox"/> | Sensitizer <input type="checkbox"/> | Combustible <input type="checkbox"/> | Explosive <input type="checkbox"/> | Pyrophoric <input type="checkbox"/> | | | |
| Toxic <input type="checkbox"/> | Highly Toxic <input type="checkbox"/> | Flammable <input type="checkbox"/> | Oxidizer <input type="checkbox"/> | Water-reactive <input type="checkbox"/> | | | |
| Corrosive <input type="checkbox"/> | Carcinogenic <input type="checkbox"/> | Compressed Gas <input type="checkbox"/> | Organic Peroxide <input type="checkbox"/> | Unstable <input type="checkbox"/> | | | |

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.

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| Inhalation | Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest. |
| 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 | If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately. |
| Ingestion | Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately. |
| Notes to Physician | SKIN: 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. INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. Careful gastric lavage may be considered to evacuate large quantities of material. |

SECTION 5. FIRE FIGHTING MEASURES

| | | | |
|---|---|------------------------------|----------|
| NFPA Flammability Classification | Not applicable. | | |
| Flash Point | Not applicable. | | |
| Lower Flammable Limit | No data. | Upper Flammable Limit | No data. |
| Autoignition Temperature | Not applicable. | | |
| Hazardous Combustion Products | Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. | | |
| Special Properties | This is an aqueous solution. After the water component evaporates, the remaining material will burn. | | |
| Extinguishing Media | Use dry chemical, "alcohol" foam or Carbon Dioxide. Water may be ineffective as an extinguishing medium, but may be used to cool fire-exposed containers. | | |
| Protection of Fire Fighters | 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 is miscible in water. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

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| Handling | Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Use only with adequate ventilation and personal protective equipment. 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 | Store in resin-coated, stainless steel or aluminum containers. Iron containers are acceptable for short durations although lower molecular weight glycols can cause corrosion. Keep container tightly closed and dry. Protect against physical damage. Do not store with strong oxidizing agents. Keep away from heat, flame and all other potential ignition sources. Do not store at temperatures above 49° C (120° F) or in direct sunlight. 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 are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.

Hand Protection None required for incidental contact. Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

Body Protection Use clean protective clothing 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 clothing before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.

Respiratory Protection 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.

Occupational Exposure Guidelines

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| Substance Propylene Glycol | Applicable Workplace Exposure Levels AIHA WEEL (United States). TWA: 10 mg/m ³ 8 hour(s). Form: Aerosol. |
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

| | | | | | |
|----------------------------|------------------------------------|--------------|----------------|-------------------------------|------------------------|
| Physical State | Liquid. | Color | Colorless. | Odor | Mild. |
| Specific Gravity | 1.06 (Water = 1) | pH | Not applicable | Vapor Density | 1.3 (Air = 1) |
| Boiling Range | 105°C (221°F) | | | Melting/Freezing Point | -26°C (-14°F) |
| Vapor Pressure | <0.001 kPa (<0.01 mm Hg) (at 20°C) | | | Volatility | Negligible volatility. |
| Solubility in Water | Easily soluble in cold water. | | | Viscosity (cSt @ 40°C) | Not available. |

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| Flash Point | Not applicable. |
| Additional Properties | Gravity, °API (ASTM D287) = 2.37 @ 60° F Density = AP 8.81 Lbs/gal. |

SECTION 10. STABILITY AND REACTIVITY

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|---|---|---------------------------------|------------------------|
| 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.

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| Toxicity Data | Propylene Glycol Propylene glycol is slightly toxic by ingestion, skin contact, intraperitoneal, intravenous, subcutaneous and intramuscular routes. Repeated excessive exposure to propylene glycol has been associated with central nervous system effects. |
| | Hydraulic oil Repeated or prolonged skin contact with certain hydraulic oils can cause mild skin irritation characterized by drying, cracking (dermatitis) or oil acne. Injection 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

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| Ecotoxicity | Based on aquatic testing of similar products: Practically non-toxic to aquatic organisms. |
| Environmental Fate | This product is miscible in water and is expected to readily disperse in marine environments. This product is readily biodegradable. |

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 your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to

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clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status Not regulated by the U.S. Department of Transportation as a hazardous material.

Proper Shipping Name Not regulated.

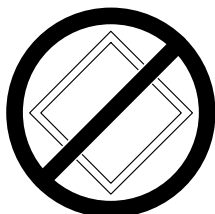
Hazard Class Not regulated.

Packing Group Not applicable.

UN/NA Number Not regulated.

Reportable Quantity A Reportable Quantity (RQ) has not been established for this material.

Placard(s)



Emergency Response Guide 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 Substances Control Act (TSCA) inventory.

SARA 302/304 Emergency Planning and Notification 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 Hazard Identification The Superfund Amendments and Reauthorization Act of 1986 (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 Toxic Chemical Notification and Release Reporting 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.

Clean Water Act (CWA) Discharges or spills of this material onto or in waters of the United States, adjoining shorelines, or into conduits leading to surface waters of the US without proper Federal or State permits should be reported to the National Response Center at (800) 424-8802.

California Proposition 65 This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

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New Jersey Right-to-Know Label New Jersey RTK: 632503001
Additional 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 1.2
Revision Date 12/6/2010

ABBREVIATIONS

AP: Approximately EQ: Equal >: Greater Than <: Less Than
NA: Not Applicable ND: No Data NE: Not Established

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

IARC: International Agency for Research on Cancer

NIOSH: National Institute of Occupational Safety and Health

NPCA: National Paint and Coating Manufacturers Association

EPA: US Environmental Protection Agency

HMIS: Hazardous Materials Information System

OSHA: Occupational Safety and Health Administration

NTP: National Toxicology Program

NFPA: National Fire Protection Association

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