

MATERIAL SAFETY DATA SHEET

CR-50

Complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200.

GOODSON

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156 Galewski Drive • P.O. Box 847 • Winona, MN 55987-0847
Toll-Free 1-800-533-8010 • Local 507-452-1830 • www.goodson.com

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1. IDENTIFICATION:

Part No. & Description: CR-50 Oil Carrier for CR-14A Powder

Product Category: Petroleum Solvent

Product Appearance and Odor: Clear water-white liquid, essentially odorless.

2. COMPONENTS AND HAZARD INFORMATION

<u>Components</u>	<u>CAS No. of Component</u>	<u>Approx. Concentration</u>
Distillates (petroleum, hydrotreated light	64742-47-8	100%

This product consists predominantly of C12-C15 isoparaffinic hydrocarbons.

This product, as manufactured by Exxon, does not contain polychlorinated bipheyls (PCB's).

All Components of this product are listed on the US TSCA inventory.

See Section 5 for Health and Hazard Information.

See Section 8 for additional Environmental Information.

Hazardous Materials Identification System(HMIS):

Health - 1 Flammability - 2 Reactivity - 0 BASIS - Recommended by Exxon

Exposure Limit for Total Product: 300ppm (2300 mg/m³) for an 8 hour work day. BASIS - Recommended by Exxon.

3. PRIMARY ROUTES OF ENTRY AND EMERGENCY & FIRST AID PROCEDURES

Eye Contact: If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

Skin: In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry clean clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Inhalation: If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

Ingestion: If ingested, DO NOT induce vomiting; call a physician immediately.

4. FIRE AND EXPLOSION HAZARD

Flash Point (minimum): Combustible - Per DOT 49 CFR 173.120; 80.5°C (177°F); ASTM D 93, Pensky Martens Closed Cup

Autoignition Temperature: Approximately 338°C (640°F); ASTM D 2155

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

Health: 1 **Flammability:** 2 **Reactivity:** 0 **BASIS:** Recommended by Exxon

Handling Precautions: This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode. Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.

Flammable or Explosive Limits (Approx. percent by volume in air):

Estimated values: Lower Flammable Limit - 1.3% Upper Flammable Limit - 8.8%

Extinguishing Media & Fire Fighting Procedures: Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Associations "Fire Protection Guide on Hazardous Materials", Tenth Edition (1991):

Use dry chemical, foam or carbon dioxide to extinguish the fire. "Water may be ineffective". but water should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect persons trying to stop a leak.

FIRE AND EXPLOSION HAZARD CONT...

Extinguishing Media & Fire Fighting Procedures cont...

Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied air breathing equipment for enclosed or confined spaces or as otherwise needed.

NOTE: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

Decomposition Products under Fire Conditions: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

"Empty" Container Warning: "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI 249.1 and other governmental and industrial references pertaining to cleaning, repairing, welding or other contemplated operations.

5. HEALTH AND HAZARD INFORMATION

Variability among individuals: Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

Effects of Overexposure (Signs and symptoms of exposure): High vapor concentrations (greater than approximately 700ppm, attainable at elevated temperatures well above ambient) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

Nature of Hazard and Toxicity Information: Prolonged or repeated skin contact with this product tends to remove skin oils, possibly leading to irritation and dermatitis; however based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an irritant by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possible death.

This product is judged to have an acute oral LD50 (rat) greater than 5g/kg of body weight and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

Pre-existing Medical Conditions which may be aggravated by exposure: Petroleum Solvents/Petroleum Hydrocarbons - Skin contact may aggravate an existing dermatitis.

6. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

Boiling Range: 218-251°C (424-484°F)

Vapor Pressure: less than 0.1mmHg @ 20°C (68°F) ASTM D 2879

Specific Gravity(15.6°C/15.6°C): 0.79 (6.56 lb/gal)

Vapor Density(Air=1): 7.3

Molecular Weight: 191

Percent Volatile by Volume: Approx. 50% in 465 minutes @ 1atm & 25°C (77°F)

pH: Essentially neutral

Evaporation Rate @ 1 ATM & 25°C(77°F)(n-butyl acetate=1): less than 0.01

Pour, Congealing or Melting Point: Not available

Solubility in Water @ 1 ATM & 25°C(77°F): Negligible: 0.0001%

Viscosity: 3.42 cSt @ 25°C(77°F) ASTM D 445

7. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.

8. ENVIRONMENTAL INFORMATION

Clean Water Act / Oil Pollution Act: This product may be classified as an oil under Section 311 of the Clean Water Act, under the Oil Pollution Act. Discharges or spill into or leading to surface waters that cause a sheen must be reported to the National Response Center (1-800-424-8802).

ENVIRONMENTAL INFORMATION CONT...

Steps to be taken in case material is released or spilled: Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile combustible vapors from absorbed material.

THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS STATE AND FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL ACTS:

Threshold Planning Quantity (TPQ), EPA Regulation 40 CFR 355 (SARA Sections 301-304): No TPQ for product or any constituent greater than 1% or 0.1% (carcinogen).

Toxic Chemical Release Reporting, EPA Regulation 40 CFR 372 (SARA Section 313): No toxic chemical is present greater than 1% of 0.1% (carcinogen).

Hazardous Chemical Reporting, EPA Regulation 40 CFR 370 (SARA Sections 311-312)

EPA Hazard Classification Code: Fire Hazard

9. PROTECTION AND PRECAUTIONS

Ventilation: Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking or use of flame or other ignition sources.

Respiratory Protection: Use supplied air respiratory protection in confined or enclosed spaces, if needed.

Protective Gloves: Use chemical-resistant gloves, if needed to avoid prolonged or repeated skin contact.

Eye Protection: Use splash goggles or face shield when eye contact may occur.

Other Protective Equipment: Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in prolonged or repeated skin contact.

Work Practices / Engineering Controls: Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

In order to prevent fire or explosion hazards, use appropriate equipment.

Information on electrical equipment appropriate for use with this product may be found in the latest edition of the National Electrical Code (NFPA-70). This document is available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269

Personal Hygiene: Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

10. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

Transportation Incident Information: For further information relative to spills resulting from transportation incidents, refer to latest Dept. of Transportation Emergency Response Guidebook for Hazardous Materials Incidents.

US DOT Hazardous Materials Shipping Description: Bulk packagings (capacity greater than 119 gallons): Petroleum Distillate, n.o.s., Combustible Liquid, UN 1268, III. Non-bulk packagings (capacity less than or equal to 119 gallons): Not regulated

OSHA Required Label Information: In compliance with hazard and right-to-know requirements, where applicable OSHA Hazard Warnings may be found on the label, bill of lading or invoice accompanying this shipment.

DANGER!: Combustible

Note: Product label may contain non-OSHA related information also.