

Material Safety Data Sheet**KORLUBE® CF-4****High Performance Heavy Duty Diesel Engine Oil****1. IDENTIFICATION**

Product name: **KORLUBE®** CF-4 10W-40, 15W-40, 15W-50, 20W-50
Usage: Lubricant
Company: Hyundai Emsys Inc.
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2. HAZARD IDENTIFICATION

Main hazards: No significant hazard
Prolonged or repeated exposure may cause irritation or dermatitis
Used oil may contain harmful materials.
NFPA Rating : Health = 1, Flammability = 1, Reactivity = 1
Eyes: Prolonged and repeated exposure may cause irritation
Skin: Prolonged and repeated contact may cause irritation or dermatitis
Inhalation: May cause irritation at throat
Ingestion: No data available

3. COMPOSITION / INGREDIENTS

Chemical name:	Lubricating Base Oil	Additive
CAS No.:	64742-54-7	-
Content (wt%):	75-90	10-25

4. FIRST AID MEASURES

Eye contact: Wash immediately with running water for 15 minutes. If irritation remains, consult a doctor.

Skin contact: Wash immediately with water and soap. Remove contaminated clothes and footwear.

Inhalation: Move victim to fresh air immediately. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

Ingestion: Do Not induce vomiting. If conscious, give 1/2 liter of water to drink immediately, Consult a doctor.

5. FIRE-FIGHTING MEASURES

- Extinguishing media:** Carbon Dioxide, Dry chemical powder and Alcohol resistant foam
- Hazards:** During combustion, it emits toxic fumes of Carbon Monoxide, Sulfur Oxides and Nitrogen Oxides.
- Protection:** Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Refer to section 8. Exposure Controls/Personal Protection. Mark out the contaminated area with signs and prevent unauthorized access.
- Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using banding. Alert the neighborhood about fumes or gas.
- Cleaning procedures:** Mix with sand or vermiculite. Refer to section 13 Disposal Considerations.

7. HANDLING AND STORAGE

- Handling requirements:** Ensure enough ventilation. Avoid formation or spread of mist. Avoid direct contact with the substance..
- Storage conditions:** Store in a cool and well ventilated place. Keep container tightly closed. Keep away from direct sunlight. Ensure storage room has retention walls. Ensure the floor of storage room is impermeable.
- Suitable packaging:** Must be kept in original packaging made by steel or Polyethylene.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures:** Ensure the storage room has retention walls. Ensure the floor of storage room is impermeable.
- Hand protection:** Gloves (Oil-resistant),
- Eye protection:** Safety glasses
- Skin protection:** Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

- State:** Liquid
- Color:** Brown
- Odor:** Mild characteristic odor
- pH:** N/A
- Flash point:** > 200°C/392°F (COC Method)
- Density (@15°C):** 0.860-0.881
- Solubility in water:** Insoluble
- Viscosity (@100°C, cSt):** 14.9-19.1

10. STABILITY AND REACTIVITY

- Stability:** Stable

- Conditions to avoid:** Heat
- Materials to avoid:** Strong oxidizing agents
- Hazard decomposition:** During combustion, it emits toxic fumes of Carbon Monoxide, Sulfur products: Oxides and Nitrogen Oxides.

11. TOXICOLOGICAL INFORMATION

- Chronic toxicity:** Danger of cumulative effects through inhalation
- Routes of exposure:** Refer to section 4 First Aid Measures.

12. ECOLOGICAL INFORMATION

- Mobility:** Floats on water
- Persistence and degradability:** Only slightly biodegradable
- Bioaccumulative potential:** Bioaccumulation potential
- Other Adverse effects:** Harmful to aquatic organisms

13. DISPOSAL CONSIDERATIONS

- Disposal operations:** D9 Physico-chemical treatment not specified elsewhere in this MSDS which result in final compounds or mixtures which are disposed of by means of any of the operations in this MSDS (e.g. evaporation, drying, calcinations, etc.).
R8 Oil re-refining or other re-use of oil
- Waste code number:** 54112
- Disposal of packaging:** Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.
- NB:** Users attention is drawn to the possible existence of any local regulations regarding disposal.

14. TRANSPORT INFORMATION

- General:** No specific transportation regulations on this product. When ship this product, closed package perfectly to avoid contacting with water and keep away from physical shock.
- UN Number:** N/A

15. REGULATORY INFORMATION

- Hazard symbols:** No significant hazard
- Water hazard class:** 3 KBwS classification
- Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in this MSDS. Users attention is drawn to the possible existence of any local regulations or provisions.

16. OTHER INFORMATION

Notice: The information presented herein is compiled from our test and research and other sources considered to be reliable and offered in good faith for the purpose of hazard communication, but do not purport to be all inclusive and shall be used only as a guide. Because product use is beyond our control, no warranty is given, expressed or implied, and we do not assume any liability for the use of information contained herein.