

## Material Safety Data Sheet (MSDS)

### 1. Articles and manufacturer information

Articles Name: CF-4 SAE 15W-40 Diesel Engine Oil

MSDS No.: AP-DP-MSDS253

Manufacturer or supplier: Francool Technology (Guangdong) Co., Ltd

Manufacturer or supplier address: Third Industrial Zone, Tanzhou Town, Zhongshan City, Guangdong Province

TEL: 0760-86657295 FAX: 0760-86217540

### 2. Composition Information

Ingredients	CAS No.	Concentration range (W%)
Light wax petroleum fractions	64742-55-8	95~100
High performance diesel engine oil composite agent	122384-87-6; 36878-20-3; 85940-28-9; 84605-29-8; 74499-35-7	3~5

Note: In terms of the scope of supplier knowledge and applicable concentration regulations, this product does not contain any other substances that are toxic or harmful to health or the environment that must be listed in this section.

Regarding occupational exposure restrictions, they are listed in Section 8.

### 3. Hazard Introduction

**Hazard category:** Unregulated.

**GHS tag elements:** Not within the scope of corresponding hazard images.

**Hazard statement:** There is no obvious known effect or serious danger.

**Prevention instructions (general):** Under normal circumstances, there is no danger. Special attention should be paid to fire prevention and the risk of high-pressure explosions. Children should not come into contact with the product. If seeking medical attention, please carry the product container and label.

**Preventive measures:** Not applicable. **Accident response:** Not applicable. **Safe storage:** Not applicable. **Disposal:** Not applicable.

**Other hazards:** May cause skin degreasing. Used engine oil may contain harmful ingredients that can cause skin cancer. Please refer to Section 11 "Toxicological Data" in this Material Safety Data Sheet.

### IV. First Aid Measures

**Inhalation:** Evacuate the scene to a place with fresh air. If symptoms appear, seek medical attention.

**Skin contact:** Remove contaminated clothing, rinse with plenty of flowing water and soap. Contaminated clothing needs to be cleaned and dried before reuse. If there are symptoms of inflammation, seek medical attention.

**Eye contact:** If in contact, immediately rinse eyes with plenty of water for at least 15 minutes; Open the eyelids and rinse to ensure thorough cleansing. If contact lenses, please remove them and clean your eyes and glasses. If inflammation occurs, please seek medical attention.

**Ingestion:** May cause vomiting; Do not induce vomiting unless guided by a professional medical professional; If swallowing a large amount of this substance, seek medical attention immediately.

**For detailed information on health effects and symptoms, please refer to Section 11.**

**When seeking medical advice,** it is stated that under normal circumstances, symptoms can be treated to directly reduce their impact and no special treatment is required.

**Advice for protecting rescuers:** Do not take action against those who do not have relevant experience or training.

## V. Fire Protection

**Suitable extinguishing agents:** Carbon dioxide, chemical dry powder, alcohol foam, polymer foam; Do not shoot water directly.

**Special hazards:** When burning or heating, the pressure may increase or even the container may burst. Pay attention to the appearance, pressure, and abnormal noise of the container at all times.

**Special hazards that may be encountered during firefighting:** Combustion decomposition products may include the following substances: carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides;

**Special fire extinguishing procedure:** Use water mist to cool the storage tanks or containers exposed to the fire.

**Fire extinguishing precautions and protective measures:** In case of fire, evacuate all personnel, leave the fire area and nearby areas, and report the fire alarm. Do not take action if there is any personal danger or if appropriate training has not been received.

**Special protective equipment for firefighters:** Firefighters must wear positive pressure supply breathing equipment (SCBA) and safety tools.

## VI. Leakage Handling

### Personal precautions:

#### Non emergency personnel:

Do not take action when there is personal danger or appropriate training has not been received. Evacuate the surrounding area to keep out unaffiliated people. Do not come into contact or walk through spilled materials. Pay attention to personal protection, avoid direct contact with skin and eyes, do not inhale gas, try to avoid personal injury, and be careful of slippery floors.

#### Emergency personnel:

Wear positive pressure supply breathing equipment (SCBA) and safety tools to prevent leakage.

#### Environmental precautions:

- ◆ Prevent dispersal of spilled material and runoff and avoid contact of spilled material with soil and water flow.
- ◆ Ventilation and exchange of air in the area.

- ◆ Eliminate or extinguish all sources of fire.
- ◆ If water has flowed into the water, please promptly notify the government safety, health and environmental protection departments.

#### Cleaning method:

- ◆ When there is a small amount of leakage, remove and replace the leaking container; Absorb with inert materials (such as sand, diatomaceous earth, vermiculite, etc.), and contaminated absorbents and effluents should be placed in appropriate containers with lids and clear markings.
- ◆ When there is a large amount of leakage, build embankments or dig pits for containment; Transfer to a tanker or dedicated collector using a pump; Contact firefighting, emergency response units, or seek assistance from suppliers.
- ◆ The collected leaked materials must be disposed of by a licensed waste disposal unit.
- ◆ The handling personnel should have appropriate protection.

## VII. Safe Disposal and Storage Methods

### Protective measures:

- ◆ Use approved flammable liquid storage containers in the workplace.
- ◆ Stay away from sparks, open flames, and other sources of ignition when using, and post no smoking signs in the work area.
- ◆ Emergency response devices that can be used at any time to extinguish fires and deal with leaks must be prepared.

- ◆ Operators must strictly wear appropriate protective equipment.
- ◆ Eating or smoking is prohibited in the work area. After operation, it is necessary to thoroughly clean before going to eat.

**Storage:**

- ◆ Store in a cool, dry, well-ventilated place out of direct sunlight.
- ◆ Stay away from heat sources, ignition sources, and incompatible substances such as oxides and strong alkalis.
- ◆ Use a non sparking and grounded ventilation system and electrical equipment to prevent them from becoming a source of ignition.
- ◆ Use appropriate buckets, tanks, cabinets, and compartments for storage, clearly label and avoid container damage.
- ◆ Unused containers and empty barrels should be tightly covered. If necessary, consider installing a leak detection and alarm system.
- ◆ The storage area and its vicinity must be equipped with emergency response devices that can be used to extinguish fires and deal with leaks at any time.

**VIII. Contact Control/Personal Protection**

**Control parameter: Occupational exposure limit:**

Constituent	Exposure limits (Workplace Safety and Health Act (Singapore).)
Solvent dewaxing heavy wax group petroleum fractions	PEL (long term): 5 mg/m <sup>3</sup> for 8 hours. Released/Revised: 1/1997 Formed: Fog PEL (short term): 10 mg/m <sup>3</sup> for 15 minutes. Released/Revised: 1/1997 Formed: Fog
Solvent dewaxed light wax group petroleum fractions	

**Recommended monitoring procedures:** If the product contains components with exposure limits, data on the atmosphere or biological environment of the individual, workplace should be monitored to determine the effectiveness of ventilation or other control measures and/or the need for respiratory protection equipment.

Appropriate references should be made to monitoring standards. It will also be necessary to refer to national guidance documents for the determination methods of harmful substances.

**Engineering control:** No special ventilation is required under normal circumstances. If the product is to be heated, atomized, spray, dusted or gasified, it is recommended to use mechanical ventilation facilities for dilution, so as to keep the vapor concentration in the air below their respective maximum allowable concentration.

All health risks associated with chemical operations must be assessed in advance to ensure reasonable control of chemical exposure levels. Personal protective equipment should only be considered when other forms of control measures, such as engineering controls, have been properly evaluated. Personal protective equipment should meet the corresponding standards, be suitable for use, in good condition, and be properly maintained.

Consult personal protective equipment providers for advice on equipment selection and corresponding standards. For detailed information, please contact the relevant standard setting unit in your country/region. The final choice of protective equipment depends on risk assessment. It is crucial to ensure that various personal protective equipment is compatible and functional.

**Environmental control:** Emissions from ventilation or work process equipment should be monitored to ensure that they meet the requirements of environmental protection regulations. In some cases, it is necessary to modify smoke scrubbers, filters, or process equipment in order to reduce emissions to an acceptable level.

**Respiratory protection:** Respiratory protection equipment is not required during normal use. If the product is to be  
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used in the case of poor ventilation, heating, atomization, spray, dusting or gasification, respiratory protection equipment must be used.

**Hand protection:** it is best to wear butyl rubber, sunny rubber, viton, saranex, barricade, chemrel and other permeable materials gloves when needed.

**Eye protection:** Avoid contact with eyes and wear protective goggles when necessary.

**Skin and body protection:** Avoid long-term or continuous contact with the skin. Wear chemical resistant gloves and protective clothing when necessary to reduce contact.

**Hygiene measures:** 1. Remove contaminated materials as soon as possible after work, wash them clean before wearing or discarding them; 2. Smoking or eating is strictly prohibited in the workplace; 3. Maintain cleanliness of the workplace.

### IX. Physical and Chemical Properties

Material state	Liquid	Shape	Clear liquid
Color	Yellow to brown homogeneous transparent	Odor	No irritating odor
Low temperature dynamic apparent viscosity (-20°C mPa·s)	Not applicable	Kinematic viscosity (100 ° C, cSt)	12.5~16.3
Open flash point (° C)	≥215	Pour point (° C)	≤-23
Melting point (°C)	No data	Boiling point (°C)	No data
Evaporation rate	No data	Octanol/water partition coefficient	No data
Autoignition temperature (° C)	No data	Decomposition temperature (° C)	No data
Flammability (solid, gas)	Not applicable	Upper and lower limits of explosion (combustion)	No data
Density (15°C, g/ml)	-1	Solubility	Insoluble in water
Vapor pressure (kPa)	No data	Vapour density (air=1)	No data

### X. Stability and Reactivity

**Stability:** Stable under normal conditions.

**Possible hazardous reactions under special circumstances:** Under normal storage and use conditions, no hazardous chemical reactions or hazardous polymerization reactions occur.

**Conditions to avoid:** Open flames, sparks, and heat sources.

**Substances to avoid:** Strong oxidants.

**Hazardous decomposition products:** In normal storage and use, no dangerous decomposition products will be produced; but carbon dioxide and unknown organic substances can be decomposed during combustion.

## XI. Toxicity Data

Component name	Hazard level
Sulfurized dodecylphenol carbonate calcium salt	Harmful to aquatic environment - Long term hazard - Category 4
nonyl-N-(nonylphenyl) aniline	Skin corrosion/irritation - Category 3 Harmful to aquatic environment - Long term danger - Category 4
Zinc dithiophosphate	Skin corrosion/irritation - Category 2 Severe eye injury/eye irritation - Category 1 Harm to aquatic environment - Acute hazard - Category 2 Harmful to aquatic environment - Long term hazard - Category 2

**Acute toxicity:** ◆ **Oral administration:** No obvious known effects or serious danger. ◆ **Skin:** May cause skin degreasing, leading to dryness and irritation.

◆ **Inhalation:** Under normal circumstances, the vapor pressure of lubricating oil is very low and will not have any impact.

**Symptoms related to physical, chemical, and toxicological properties:** ◆ **Eye contact:** No specific data displayed. ◆ **Inhalation:** No specific data displayed.

◆ **Skin contact:** May cause skin degreasing, dryness, irritation, etc. ◆ **Ingestion:** No specific data displayed.

Delayed and immediate effects, as well as chronic effects of short-term and long-term exposure:

◆ **Eye contact:** May cause temporary stinging or redness and swelling ◆ **Inhalation:** Inhalation of too many small droplets of lubricating oil may irritate the respiratory tract, causing redness and swelling.

◆ **Skin contact:** Long term contact may cause skin degreasing, dryness, dermatitis, etc. ◆ **Ingestion:** Consuming in large quantities may cause vomiting, diarrhea, and stomach pain.

Chronic toxicity or long-term toxicity: Not classified as a carcinogen by ACGIH, International Organization for Research on Cancer (IARC), or European Commission (EC). But used lubricating oil may contain ingredients that can cause skin allergies. Therefore, frequent or long-term contact with various used old products must be avoided, and high standards of personal hygiene must be maintained.

There are no obvious known effects or serious hazards such as carcinogenicity, mutagenicity, teratogenicity, developmental effects, fertility effects, etc.

## XII. Ecological Data

Possible environmental impacts: Biodegradable; This product will not cause biological deposition through the food chain in the environment; Spillage seeping into the soil can cause groundwater pollution; Spillage may form a film on the water surface, causing tangible damage to organisms and affecting their ability to inhale oxygen.

## XIII. Waste Disposal

**Disposal methods:** ◆ Consult relevant experts on the safety disposal requirements of recycled materials to ensure compliance with local waste disposal regulations. ◆ Specific incineration or sanitary burial methods can be used for

treatment. ◆ To be handled by a licensed waste disposal contractor. ◆ Empty containers or liners may retain some residual products and require specific treatment.

#### XIV. Delivery Materials

**Dangerous goods number:** This product is not classified as a hazardous substance (IMDG, ICAO/IATA).

**UN Number:** Unregulated. **Packaging category:** No requirements.

**Special transportation methods and precautions:** ◆ Land transportation, sea transportation (IMO), and air transportation (IATA/ICAO) are not restricted; ◆ During transportation, ensure that the container does not leak, collapse, fall or damage. It is strictly forbidden to mix with combustibles or combustibles, strong oxidizing chemicals and other substances; It should be equipped with leakage emergency treatment equipment

#### XV. Regulatory Information

##### Applicable regulations:

◆ Emergency planning and social informed regulations 40 CFR 372 (United States):

This product does not contain the chemicals listed in Form II of the Toxics Release Inventory (TRI) List of 2003, in accordance with the publication reporting requirements of the Emergency Plan and Social Informed Regulation 40 CFR 372 (USA)

◆ US Catalogue (TSCA8b (Toxic Substances Control Act): All components have been active or exempted.

All components of the existing list of chemical substances in China (IECSC) are listed or exempted.

◆ Clean Water Regulations (40 CFR 110)/Oil Pollution Regulations 1990 (United States):

This product is classified under the Clean Water Regulations (40 CFR 110)/Oil Pollution Regulations 1990 (United States) Section 311.

◆ Protection of the Ozone Layer (Fourth Montreal Treaty Conference):

This product does not contain any chemicals related to any additional tables (A/B/C/E) in the treaty.

◆ Restriction on the Use of Hazardous Substances (EU: RoHS):

This product includes its packaging/packaging materials and does not contain the following six chemical substances that are restricted by the Directive 2002/95/EC of the European Parliament. Lead, mercury, cadmium, hexavalent chromium, polybenzenes (PBB) or polydiphenyls (PBDE). Our company sells this product in accordance with the current ROHS2.0 regulations.

◆ Guidelines for the European Parliament 2002/45/EC (EU: SCCPs):

This product does not contain short chain chlorinated paraffins (alkanes, C10-C13, chlorine: SCCPs) that are restricted by the European Parliament's 2002/45/EC guidelines.

#### XVI. Other Data

**Reference:** This Material Safety Data Sheet is written in the format of the international standard ISO 11014-1:1994 for "Chemical Product Material Safety Data Sheets"

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**Attention: Guangdong Allpass Lubrication Technology Co., Ltd. has made every effort to ensure the accuracy,**

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