



To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrant or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)  
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team  
Zep Inc.

## SAFETY DATA SHEET

According to US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date: Apr. 03. 1023

### SECTION 1: IDENTIFICATION

#### Product Name

KAF I (Tesla KAF 1 Electric Drive Motor Fluid)

#### Recommended use and restriction on use

Use of the Substance/Mixture : Transmission oil  
Uses advised against : Use only for Lubricants

#### Supplier's details

##### Supplier

Name: SK Enmove Americas Inc.  
Address: 11700 Katy Freeway Suite 1200, Houston, TX 77079, USA  
Information Contact: +1-859-625-8201  
E mail: j.presley@skenmove.com

#### Emergency telephone numbers

+1-859-625-8201

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the chemical in accordance with paragraph (d) of § 1910.1200

- Based on available data this mixture is not classified as hazardous.

#### Hazards not otherwise classified (HNOC)

- None as defined under 29 CFR 1910.1200.  
- Warning: If this material is overheated, especially in the presence of water, hydrogen sulphide may be released; this can cause rapid respiratory collapse, coma and death without necessarily any warning odour being sensed.

#### Health hazards

Excessive exposure may result in eye, skin, or respiratory irritation

#### Environmental hazards

Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Description of the mixture:

- Hydrocarbon lubricating base oil with functional additives

#### Hazardous ingredients:

Substance Name	CAS No.	Concentration (wt%)
1-Decene tetramer, mixed with 1-decene trimer, hydrogenated	68649-12-7	$\geq 75, < 80$
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	$\geq 1, < 5$
Lubricating oils (petroleum), (C=15- 30), hydrotreated neutral oil-based	72623-86-0	$\geq 1, < 5$

Other ingredients are either not hazardous or are below the regulatory disclosure limit.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### **First-aid measures general**

- No general information.

#### **First-aid measures after inhalation**

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

#### **Skin Contact**

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.

#### **Eye Contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

#### **Ingestion**

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

### Most important symptoms and effects, both acute and delayed

Not available

### Indication of any immediate medical attention and special treatment needed

Notify medical personnel of contaminated situations and have them take appropriate protective measures.

## SECTION 5: FIRE FIGHTING MEASURES

### Extinguishing media

#### **Suitable extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

#### **Unsuitable extinguishing media**

- Avoid use of water jet for extinguishing

### Special hazards arising from the substrate or mixture

#### **Hazardous combustion products**

- Not available

### Advice for fire-fighters

- Move containers from fire area if you can do without the risk.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local fire station and inform the location of the fire and characteristics hazard.
- Keep containers cool with water spray.
- Use firefighting procedures suitable for surrounding area.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment, and emergency procedures

#### **For non-emergency personnel**

- Protective equipment: Wear proper protective equipment.
- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.

#### **For emergency responders- Ventilate closed spaces before entering.**

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Do not direct water at spill or source of leak.

### Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.
- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

### **Methods and material for containment and cleaning up**

#### **For containment**

- Clear spills immediately
- Clean up all spills immediately.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, flame, or ignition sources.

#### **For cleaning up**

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Prevent the influx to waterways, sewers, basements, or confined spaces.

#### **Other information**

- Slippery when spilt.

### **Reference to other sections**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

## **SECTION 7: HANDLING AND STORAGE**

### **Precautions for safe handling**

- Avoid direct physical contact.
- Since emptied containers retain product residue (vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.

### **Conditions for safe storage, including any incompatibilities**

- Check regularly for leaks.
- Do not apply any physical shock to container.
- Keep sealed when not in use.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.
- Store away from water and sewer.
- Collected them in sealed containers.

## **SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

### **Control parameters**

#### **Occupational exposure limit values**

When mists/aerosols can occur, the following are recommended: 5mg/m<sup>3</sup> - ACGIH TLV, 10 mg/m<sup>3</sup> - ACGIH STEL

#### **Biological limit values**

No biological limit allocated.

#### **Exposure limit at intended use**

- Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### **Exposure controls**

#### **Appropriate engineering controls**

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

#### personal protective equipment

##### Hand protection

- Wear appropriate glove.

##### Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

##### Skin protection

- Wear appropriate clothing.

##### Respiratory Protection

- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.

##### Thermal hazards

- Not available

##### Others

- It is necessary to wear protective clothes and other protection equipment. Cover your face, head, and neck.
- Prior to removing protective garments, the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.

#### Environmental exposure controls

- Do not let product enter drains. For ecological information refer to section 12.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance (State)	Liquid
Appearance (Color)	Transparent brown
Odor	Mild petroleum odor
Odor threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point and boiling range	≥ 290 °C (554°F)
Flash point	216 °C (420°F) (COC)
Evaporating Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or explosive limits	Not available
Vapor pressure	≤ 0.1 kPa (20 °C)(68°F)
Vapor density	≥ 5 (Air = 1)
Relative density	0.84 (15.6 °C) (60°F)
Solubility	Not available
Partition coefficient of n-octanol/water	Not available
Autoignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	29 mm <sup>2</sup> /s (40°C)(104°F)
Explosives properties	Not available
Oxidising properties	Not available

### Other information

- DMSO extract by IP346 : Less than 3.0 wt% (mineral oil component only)

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

- Not available

### Chemical stability

- This material is stable under recommended storage and handling conditions.

### Possibility of Hazardous Reaction

- Hazardous Polymerization will not occur.

### Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

### Incompatible materials

- Not available

### Hazardous decomposition products

- May emit flammable vapor if involved in fire.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Product

Acute oral toxicity	No data is available on the product itself.
Acute inhalation toxicity	No data is available on the product itself.
Acute dermal toxicity	No data is available on the product itself.
Skin corrosion/irritation	No data is available on the product itself.
Eye damage/irritation	No data is available on the product itself.
Respiratory or skin sensitisation	No data is available on the product itself.
Germ cell mutagenicity	
Genotoxicity in vitro	No data is available on the product itself.
Genotoxicity in vivo	No data is available on the product itself.
Carcinogenicity	No data is available on the product itself.
Reproductive toxicity	No data is available on the product itself.
STOT - single exposure	No data is available on the product itself.
STOT - repeated exposure	No data is available on the product itself.
Aspiration hazard	No data is available on the product itself.

#### Component

##### **1-Decene tetramer, mixed with 1-decene trimer, hydrogenated**

Acute oral toxicity	LD50 Rat: > 5,000 mg/kg
Acute inhalation toxicity	LC50 Rat: > 5,000 mg/m3, Exposure time: 4 h, Aerosol
Acute dermal toxicity	LD50 Rabbit: > 2,000 mg/kg
Eye damage/irritation	Species: Rabbit Result: May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.
Respiratory or skin sensitisation	Method: OECD Test Guideline 406 Test substance: Read-across (Analogy) Based on available data, the classification criteria are not met.
Aspiration hazard	May be fatal if swallowed and enters airways. Based on physicochemical properties of the material

##### **Distillates (petroleum), hydrotreated heavy paraffinic**

Acute oral toxicity	LD50 Rat: > 5,000 mg/kg
Acute inhalation toxicity	LC50 Rat: > 5 mg/l, Exposure time: 4 h, dust/mist
Acute dermal toxicity	LD50 Rabbit: > 2,000 mg/kg
Carcinogenicity	No data available
Aspiration hazard	May be fatal if swallowed and enters airways

##### **Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based**

Acute oral toxicity	LD50 Rat: > 5,000 mg/kg
Acute inhalation toxicity	LC50 Rat: > 5 mg/l, Exposure time: 4 h, dust/mist
Acute dermal toxicity	LD50 Rabbit: > 2,000 mg/kg

Skin corrosion/irritation	Species: Rabbit Result: No skin irritation Based on available data, the classification criteria are not met.
Eye damage/irritation	Species: Rabbit Result: No eye irritation Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Method: OECD Test Guideline 406 Test substance: Read-across (Analogy) Based on available data, the classification criteria are not met.
Germ cell mutagenicity	No data available Method: OECD Test Guideline 474 Based on available data, the classification criteria are not met.
Genotoxicity in vitro	
Genotoxicity in vivo	
Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT - single exposure	Remarks: No data available
STOT - repeated exposure	Remarks: No data available
Aspiration hazard	May be fatal if swallowed and enters airways.

## Carcinogenicity

### IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

### NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

#### Product

Toxicity to fish	No data is available on the product itself.
Toxicity to daphnia and other aquatic invertebrates	No data is available on the product itself.
Toxicity to algae	No data is available on the product itself.

#### Component

##### 1-Decene tetramer, mixed with 1-decene trimer, hydrogenated

Toxicity to fish	LC50 1000 mg/ℓ 96 hr Oncorhynchus mykiss (e-ChemPortal;HPVIS)
Toxicity to daphnia and other aquatic invertebrates	LC50 1000 mg/ℓ 48 hr Daphnia magna (e-ChemPortal;HPVIS)
Toxicity to algae	EC50 1000 mg/ℓ 96 hr Selenastrum capricornutum (e-ChemPortal;HPVIS)

##### Distillates (petroleum), hydrotreated heavy paraffinic

Toxicity to fish	Short term : LL50 (4 days) 100 mg/L Long term : NOELR (14 days) 1 g/L
Toxicity to daphnia and other aquatic invertebrates	Short term : LL50 (4 days) 10 g/L, LL50 (72 h) 10 g/L, LL50 (48 h) 10 g/L, LL50 (24 h) 10 g/L, EL50 (48 h) 10 g/L [1] Long term : na
Toxicity to algae	Short term : No data is available Long term : No data is available

**Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based**

Toxicity to fish	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202  NOEL (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	NOEC (algae): >= 100 mg/l Exposure time: 72 h

**Persistence and degradability****Persistence**

1-Decene tetramer, mixed with 1-decene trimer, hydrogenated : log Kow 7.64 (e-ChemPortal;HPVIS)  
 Distillates (petroleum), hydrotreated heavy paraffinic : log Pow = 1.99 ~ 18.02 (20° C) (ECHA)  
 Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : log Kow 3.9-6 (IUCLID)

**Degradability**

Not available

**Bioaccumulative potential****Bioaccumulative potential**

1-Decene tetramer, mixed with 1-decene trimer, hydrogenated : BCF 1640 (Estimate)

**Biodegradation**

1-Decene tetramer, mixed with 1-decene trimer, hydrogenated : 84 (%) 28 day (Degradation in vivo accumulation potential to be so well Low) (e-ChemPortal;HPVIS)  
 Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based : 6 (%) 28 day (IUCLID)

**Mobility in soil**

1-Decene tetramer, mixed with 1-decene trimer, hydrogenated : Koc 192200000 (Can be adsorbed in the soil, Estimates)

**Other adverse effects****Product**

Additional ecological information	None known
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**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment methods**

Disposal recommendations based on material as supplied, Disposal must be in accordance with applicable laws and regulations, and material characteristics at time of disposal

For the safety of persons conducting disposal, recycling or reclamation activities, refer to the information in Section 8, Exposure control and personal protection.

**Disposal recommendations****Product**

The product should not be allowed to enter drains, water courses or the soil.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Dispose of contents/ container to an approved waste disposal plant.

**Empty Container**

Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.



## SECTION 14: TRANSPORTATION INFORMATION

### LAND (US DOT) :

Not regulated for land transport

### SEA (IMDG)

Not Regulated for Sea Transport according to IMDG-Code.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code :

Not applicable

### AIR (IATA)

Not Regulated for Air Transport.

## SECTION 15: REGULATORY INFORMATION

### OSHA HAZARD COMMUNICATION STANDARD

This material is not considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

### Toxic Substances Control Acts(TSCA)

Active TSCA Inventory : On the inventory, or in compliance with the inventory

### EPCRA -Emergency Planning and Community Right-to-Know Act

Not contain any components with a CERCLA RQ., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Not contain any components with a section 302 EHS TPQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

Not contain any components with a section 304 EHS RQ.

### SARA 311/312 Hazards

Not applicable

### SARA 313

Not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16: OTHER INFORMATION

NFPA Hazard Codes	Health	Fire	Instability
	0	1	0
HMIS	Health Hazards	Flammability	Physical Protection
	0	1	0

### Abbreviations and acronyms

DNEL : Derive no effects level

PNEC : Predicted no effect concentration

ATE : Acute toxicity estimate

LC50 : Lethal Concentration to 50 % of a test population

LD50 : Lethal Dose to 50% of a test population (Median Lethal Dose)

TWA : Time weighted average

### Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB, ECHA, US Toxic Substances Control Act (TSCA), US California Proposition 65, US Occupational Safety & Health Administration (OSHA) 29 CFR 1910.1200 (Hazard Communication Standard)

**Further information**

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only.

It should not therefore be construed as guaranteeing any specific property of the product.