

SAFETY DATA SHEET

Date Issued : 7/11/2012
MSDS No : F-3000-400
Date Revised : 3/11/2013
Revision No : 1

TKO-FF

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TKO-FF

GENERAL USE: Vacuum Pump Fluid

ALTERNATE TRADE NAME(S) / PRODUCT CODE(S): TKOFFCA, TKOFFCP, TKOFFDD, TKOFFG1, TKOFFG5, TKOFFG55, TKOFFQ1

MANUFACTURER

Kurt J Lesker Company
 United States
 1925 Route 51
 Jefferson Hills, PA 15025
E-Mail: msds@lesker.com
Service Number: 412-387-9200
 Kurt J Lesker Company LTD
 United Kingdom
 15-16 Burgess Road
 Hastings, East Sussex, TN35 4NR
 England
Service Number: +44 (0) 1424 458100

24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Response provided by
 3E Global Incident Response Hotline

When calling, refer to Kurt J Lesker Company
 Global Response Access Code: 333594

North America [USA, Canada, Mexico]: 1-866-519-4752
 Mainland China: (+86) 4001 2001 74
 Europe: {int'l call prefix}-1-760-476-3961
 Asia Pacific: {int'l call prefix}-1-760-476-3960
 Middle East & Africa: {int'l call prefix}-1-760-476-3959

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

"N" - Dangerous for the environment

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.


"T" - Toxic

R45: May cause cancer.

GHS CLASSIFICATIONS

Health	Environmental
Carcinogenicity, Category 1B	Chronic Hazards to the Aquatic Environment, Category 3

GHS LABEL

 Health hazard	
DANGER	
H350: May cause cancer . H412: Harmful to aquatic life with long lasting effects.	

PRECAUTIONARY STATEMENT(S)

Prevention:

P281: Use personal protective equipment as required.
 P273: Avoid release to the environment.

Response:

P308+P313: IF exposed or concerned: Get medical advice/attention.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear liquid

POTENTIAL HEALTH EFFECTS

EYES: Contact may cause eye irritation.

SKIN: May cause skin irritation.

SKIN ABSORPTION: May be harmful in contact with skin.

INGESTION: May be harmful if swallowed.

INHALATION: May be harmful if inhaled.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

SKIN: General observations of persons occupationally exposed to lubricants or mineral oils or products based on these oils indicate that higher viscosity oils can block skin pores causing an acne-like disorder. In addition, the oils or certain additives or impurities in the oils, as well as mechanical irritation from contaminants in oil based products, may cause dry cracked irritated skin (dermatitis).

The International Petroleum Industry Environmental Conservation Association (IPIECA) advises that there is sufficient read-across data to assess the skin irritancy hazard of most petroleum substances (hydrocarbons in general) may cause defatting of the skin, leading to skin dryness and cracking. It is advised to include appropriate warnings on the SDS.

ACUTE TOXICITY: Poses little or no immediate hazard.

CHRONIC EFFECTS: Not Available

CARCINOGENICITY: Not listed as a human carcinogen

MUTAGENICITY: Not Available

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

ROUTES OF ENTRY: Inhalation, ingestion, eye contact, or skin contact.

SENSITIZATION: None expected.

PHYSICAL HAZARDS: This substance is not considered hazardous in the form supplied.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Mineral Oil	0 - 100	8042-47-5	232-455-8
Gasoil - Unspecified - Distillates (petroleum), Hydrotreated Middle	0 - 100	64742-46-7	265-148-2
Distillates, Petroleum, Hydrotreated Light	0 - 100	64742-47-8	265-149-8
Mineral Oil	0 - 100	64742-53-6	265-156-6
Distillates, Petroleum, Hydrotreated Heavy Paraffinic	0 - 100	64742-54-7	265-157-1
Petroleum Distillates	0 - 100	64742-55-8	265-158-7
Baseoil - Unspecified - Lubricating Oils (petroleum), C20-50, Hydrotreated Neutral Oil-based, High-v	0 - 100	72623-85-9	276-736-3
Baseoil - Unspecified - Lubricating Oils (petroleum), C15-30, Hydrotreated Neutral Oil-base	0 - 100	72623-86-0	276-737-9
Baseoil - Unspecified - Lubricating Oils (petroleum), C20-50, Hydrotreated Neutral Oil-based	0 - 100	72623-87-1	276-738-4
Hydrotreated Paraffinic Oil	0 - 100	72623-84-8	
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C15-30	0 - 100	178603-64-0	
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C20-40	0 - 100	178603-65-1	
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C25-55	0 - 100	178603-66-2	
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C10-25	0 - 100	445411-73-4	

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Rinse mouth. Get medical advice/attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT AND METHOD: > 220°C (Cleveland Open Cup ASTM D92)

AUTOIGNITION TEMPERATURE: Not Available

FLAMMABLE CLASS: Combustible.

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, Sulfur oxides, Nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spills immediately, observing precautions in Protective Equipment section.

LARGE SPILL: Collect spilled material in appropriate container. Spill may be reportable . Consult section 15 for Reportable Quantities.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

GENERAL PROCEDURES: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources if safe to do so. Avoid formation of dust. Provide appropriate exhaust ventilation where dust is formed. Avoid breathing (dust, vapor, mist, gas). Practice good chemical hygiene during and after use. Avoid release to the environment.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: To avoid risks to human health and the environment, comply with the instructions for use.

HANDLING: Keep away from heat and flame. Keep container closed when not in use. Remove contaminated clothing and wash before reuse. Wash hands before eating and wash before reuse. Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses.

SKIN: Wear protective gloves.

RESPIRATORY: Not normally needed. If ventilation is inadequate and this material is handled at elevated temperatures or dusts/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Practice good chemical hygiene during and after use.

COMMENTS:

COMPONENT EXPOSURE LIMITS

Component	Location, Type	Value (mg/m3)
Oil mist	ACGIH TLV TWA	5
	ACGIH TLV STEL	10
	OSHA OEL TWA	5

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Petroleum

COLOR: Clear

pH: Not Available

PERCENT VOLATILE: Not Available

VAPOR PRESSURE: < 1 Pa at 20°C

VAPOR DENSITY: > 1
BOILING POINT: Not Available
POUR POINT: -15°C
FLASH POINT AND METHOD: > 220°C (Cleveland Open Cup ASTM D92)
SOLUBILITY IN WATER: Insoluble
DENSITY: Not Available
SPECIFIC GRAVITY: Not Available
VISCOSITY #1: 7.6 cSt at 100°C
VISCOSITY #2: 55 cSt at 40°C

10. STABILITY AND REACTIVITY

STABLE: Yes
HAZARDOUS POLYMERIZATION: No
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, Sulfur oxides, Nitrogen oxides.
INCOMPATIBLE MATERIALS: Strong acids, Oxidizing materials, Halogens.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: Not Available
SKIN ABSORPTION: Not Available
ORAL LD₅₀: Not Available
INHALATION LC₅₀: Not Available

CARCINOGENICITY

IARC: Not listed
NTP: Not listed
OSHA: Not listed

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

MUTAGENICITY: Not Available

12. ECOLOGICAL INFORMATION

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE): Not Available

CHEMICAL FATE INFORMATION: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of according to applicable federal, state, provincial, and local regulations.

PRODUCT DISPOSAL: Contact a licensed waste disposal company.

EMPTY CONTAINER: Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not Regulated

ROAD AND RAIL (UK only) (CDG):

HAZARD CLASS: Not listed or controlled

AIR (ICAO/IATA)

SHIPPING NAME: Not Regulated

VESSEL (IMO/IMDG)

SHIPPING NAME: Not Regulated

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

311/312 HAZARD CATEGORIES: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Distillates, Petroleum, Hydrotreated Light	64742-47-8
Distillates, Petroleum, Hydrotreated Heavy Paraffinic	64742-54-7

TSCA STATUS: All components of this product are included in inventory, exempt, or notified**REGULATIONS****STATE REGULATIONS:** Not listed**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.**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Toxic

DOMESTIC SUBSTANCE LIST (INVENTORY): All components of this product are included in inventory, exempt, or notified**EUROPEAN COMMUNITY****EEC LABEL SYMBOL AND CLASSIFICATION**

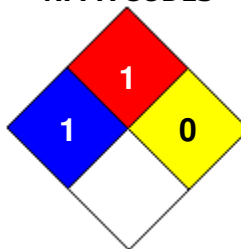
"N" - Dangerous for the environment
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 S61: Avoid release to the environment. Refer to special instructions/safety data sheets.



"T" - Toxic
 R45: May cause cancer.
 S53: Avoid exposure — obtain special instructions before use.
 S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

INTERNATIONAL REGULATIONS**(WGK) CLASSIFICATION:** Not listed**16. OTHER INFORMATION****APPROVED BY:** EHS DEPT**PREPARED BY:** E Bolton**INFORMATION CONTACT:** msds@lesker.com**REVISION SUMMARY:** This MSDS replaces the 7/26/2012 MSDS.**HMIS RATING**

HEALTH	*	1
FLAMMABILITY		1
PHYSICAL HAZARD		0
PERSONAL PROTECTION		C

NFPA CODES**GENERAL STATEMENTS:** The physical and toxicological properties of this material have not been thoroughly investigated.**MANUFACTURER DISCLAIMER:**

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