SAFETY DATA SHEET

Date Issued : 2/1/2011
MSDS No : F-3000-18
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Revision No : 6

TKO-19 ULTRA

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TKO-19 ULTRA
GENERAL USE: Vacuum Pump Fluid
PRODUCT DESCRIPTION: 5095C3HJ
CHEMICAL FAMILY: Hydrocarbon
MOLECULAR FORMULA: (CH2)n; 20=
GENERIC NAME: White Oil
ALTERNATE TRADE NAME(S) / PRODUCT CODE(S): TKO19ULTQ1, TKO19ULTG1, TKO19ULTG5, TKO19ULTG55

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
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15-16 Burgess Road
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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

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Dermal), Category 4

GHS LABEL

Exclamation mark

HAZARD STATEMENTS

H312: Harmful in contact with skin.

PRECAUTIONARY STATEMENT(S)

Prevention:

P103: Read label before use.

Response:

P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P363: Wash contaminated clothing before reuse.

Storage:

3811JYHQ: Store in a well-ventilated place away from Oxidizing material. Keep container closed when not in use.

Disposal:

7794ONTN: Dispose of contents/container to segregated storage. Dispose of according to all applicable regulations.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear liquid

IMMEDIATE CONCERNS: This product is not hazardous under conditions of normal use. Thermal decomposition of this product will generate carbon monoxide, carbon dioxide, and other toxic materials. When fighting fires, use full turnout gear and self contained breathing apparatus in positive pressure mode.

POTENTIAL HEALTH EFFECTS

EYES: May cause mild transient irritation but there is no evidence of long term harmful effects from available information.

SKIN: May cause mild transient irritation but there is no evidence of long term harmful effects from available information. Skin:In the event of injection into underlying tissue, immediate treatment should include extensive incision, debridgement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

SKIN ABSORPTION: A single, prolonged exposure is not likely to result in the material being absorbed through skin in harmful amount.

INGESTION: Inhalation or Ingestion: Inhalation of vapor or ingestion of liquid accompanied by vomiting may cause lung aspiration which could lead to pulmonary edema or chemical pneumonia.
Exposed persons should seek medical advise and be kept under observation for at least 48 hours to monitor for delayed effects.

INHALATION: Avoid breathing vapors or mists. Poses little or no immediate hazard.

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

CARCINOGENICITY: Not listed as a human carcinogen (IARC: International Agency for Research on Cancer, NTP: US National Toxicology Program, ACIGH: American Conference of Governmental Industrial Hygienists)

MUTAGENICITY: Not Available

MEDICAL CONDITIONS AGGRAVATED: Not fully known.

TARGET ORGAN STATEMENT: Inhalation, ingestion, eye contact, or skin contact.

IRRITANCY: May cause mild transient irritation but there is no evidence of long term harmful effects from available information.

SENSITIZATION: None expected.

COMMENTS HEALTH: 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 additon, the oils or certain additives or imputites 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 approprite warnings on the SDS.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Vol. %	CAS
Mineral Oil	~ 100	8042-47-5
Vitamin E	< 0.001	10191-41-0

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: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

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

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: redness and / or swelling

SKIN: redness and / or swelling

SKIN ABSORPTION: None expected.

INGESTION: None expected.

INHALATION: Shortness of breath, coughing.

ACUTE TOXICITY: Poses little or no immediate hazard.

CHRONIC EFFECTS: Prolonged inhalation may be harmful.

NOTES TO PHYSICIAN: Inhalation or Ingestion: Inhalation of vapor or ingestion of liquid accompanied by vomiting may cause lung aspiration which could lead to pulmonary edema or chemical pneumonia.
Exposed persons should seek medical advise and be kept under observation for at least 48 hours to monitor for delayed effects.
Ingestion: The viscosity range of this product is greater than 100 SUS at 100 degrees F. There is low risk of aspiration upon ingestion. Careful gastric lavage or emesis may be considered to evacuate large quantities of material.
Skin:In the event of injection into underlying tissue, immediate treatment should include extensive incision, debridgement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: OSHA Class III B Combustible Liquid Not classified under GHS

FLAME PROPAGATION OR BURNING RATE OF SOLIDS: This material will not readily ignite but will burn in a fire. This material will release vapors when heated above the flash point which can ignite when exposed to a source of ignition. In enclosed spaces, heated vapors can can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

GENERAL HAZARD: Containers can build up pressure if exposed to heat (fire).

EXTINGUISHING MEDIA: Use dry chemical, approved foam, carbon dioxide, or water fog. Avoid using water spray which may spread the fire. Carbon dioxide or inert gas may displace oxygen. Observe caution when using in a confined space.

HAZARDOUS COMBUSTION PRODUCTS: Can burn in fire, releasing toxic vapors. Thermal decomposition of this product will generate carbon monoxide, carbon dioxide, and other toxic materials.

OTHER CONSIDERATIONS: Oil will float on water and can spread fire

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

SENSITIVE TO STATIC DISCHARGE: Static charge can accumulate by agitation or when pouring or dispensing this product.

6. ACCIDENTAL RELEASE MEASURES

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

LARGE SPILL: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. LARGE SPILLS: Shut off leak if safe to do so. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

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: Clean up spills immediately, observing precautions in Protective Equipment section. Do not flush to sewer. Absorb spill with inert material, oil dry or spill absorbants.Collect contaminated media for proper disposal according to all applicable regulations. It may be possible to vaccum and reclaim the spilled liquid.

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: S3/9/14: Keep in a cool, well-ventilated place away from... Oxidizing materials Do not reuse this container. "Empty" containers retain product 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. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels. If ventilation is inadequate and this material is handled at elevated temperatures or dusts/fumes/mists are generated Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Observe recommended ACGIH threshold limits for oil mists : 5 mg per cubic meter TLV-TWA; 10 mg per cubic meter TLV-STEL

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

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.

PROTECTIVE CLOTHING: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

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

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

COMMENTS:

EXPOSURE LIMITS FOR OIL MISTS

COMPONENT	TYPE	VALUE
Mineral Oil Mist	TWA (ACGIH)	5.0 mg/m3
	STEL (ACGIH)	10.0 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid

ODOR: None

COLOR: Transparent water white

pH: Not Available

PERCENT VOLATILE: Negligible

FLASH POINT AND METHOD: > 188°C (370°F) (Cleveland Open Cup ASTM D92)

FLAMMABLE LIMITS: Material will burn in a fire.

AUTOIGNITION TEMPERATURE: ~ 260°C to 371°C

VAPOR PRESSURE: < 0.01 mm Hg at 20°C

VAPOR DENSITY: Not Available

BOILING POINT: ~ 310°C (590°F)

FREEZING POINT: Not Available

MELTING POINT: Not Available

POUR POINT: -23°C to -7°C

SOLUBILITY IN WATER: Insoluble in water. Soluble in hydrocarbon oil and organic solvents

SPECIFIC GRAVITY: ~ 0.86

VISCOSITY #1: ~ 60 cSt at 40°C ASTM D445

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stable. However, may decompose if heated.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep cool. Protect from sunlight.

HAZARDOUS DECOMPOSITION PRODUCTS: Stable. However, may decompose if heated. Thermal decomposition of this product will generate carbon monoxide, carbon dioxide, and other toxic materials.

INCOMPATIBLE MATERIALS: Avoid high temperatures. Oxidizing materials

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Non irritating

DERMAL LD_{50}: > 2000 mg/kg (dermal, rabbit)

Notes: Non irritating

SKIN ABSORPTION: A single, prolonged exposure is not likely to result in the material being absorbed through skin in harmful amount.

ORAL LD_{50}: > 5000 mg/kg (oral, rat)

Notes: Ingestion is unlikey to have any toxic effects but the product may act as an intestinal lubricant and result in diarrhea and loose stool Inhalation or Ingestion: Inhalation of vapor or ingestion of liquid accompanied by vomiting may cause lung aspiration which could lead to pulmonary edema or chemical pneumonia.
Exposed persons should seek medical advise and be kept under observation for at least 48 hours to monitor for delayed effects.

INHALATION LC_{50}: > 2180 mg/m3 (rat)

Notes: Harmful effects are not expected from static vapor at ambient temperature. Inhalation of mists or spray may be harmful.

EYE EFFECTS: May cause mild transient irritation but there is no evidence of long term harmful effects from available information.

SKIN EFFECTS: May cause mild transient irritation but there is no evidence of long term harmful effects from available information.

CHRONIC: Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis). Prolonged or excessive inhalation may cause respiratory tract irritation.

CARCINOGENICITY

IARC: Not listed as a human carcinogen

NTP: Not listed as a human carcinogen

OSHA: Not listed as a human carcinogen

Notes: Highly refined mineral oils are not classified as human carcinogens, However, related forms of untreated and mildly treated oils are listed as human carcinogens by both IARC and NTP.

SENSITIZATION: None expected.

NEUROTOXICITY: Not Available

GENETIC EFFECTS: Not Available

REPRODUCTIVE EFFECTS: Not Available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Avoid release to the environment. Avoid runoff into storm sewers and ditches which lead to waterways.

ECOTOXICOLOGICAL INFORMATION: Not Available

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE): Not Available

96-HOUR LC_{50}: > 10000 mg/L (Lepomis macrochirus)

GENERAL COMMENTS: Coefficient of Octanol / Water distribution (Kow) greater than 6

COMMENTS: This product is stable in water and can be mechanically seperated. The water may be suitable for disposal in a biological waste water treatment plant. This product will inherently biodegrade in water under aerobic conditions and will ultimately be biodegraded by micro-organisms although the degree will be limited by its low water solubility.

13. DISPOSAL CONSIDERATIONS

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

EMPTY CONTAINER: Recycle or Dispose of according to applicable federal, state, provincial, and local regulations.

COMMENTS: Hazard characteristics and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

PRIMARY HAZARD CLASS/DIVISION: Not hazardous

REPORTABLE QUANTITY (RQ) UNDER CERCLA: A reportable quantity (RQ) has not been established for this material

MARINE POLLUTANT #1: Not a DOT 'Marine Pollutant' per 49CFR 171.8

SPECIAL SHIPPING NOTES: The product(s) represented by this MSDS is (are) regulated as "oil" under 49CFR Part 130 (Oil Spill Prevention and Response Plans). Shipments by rail or highway in packaging having a capacity of 3,500 gallons or more and/or quantities greater than 42,000 gallons (1000 barrels) per package are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements. The requirements of this part do not apply to transporation of oil by aircraft or vessel or mixtures less than 10%oil by weight or effect the notification requirements of the US coast Guard or EPA.

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not Regulated

PRIMARY HAZARD CLASS/DIVISION: Not hazardous

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: None

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** No **CHRONIC:** No

313 REPORTABLE INGREDIENTS: None

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: Not listed or controlled

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: NA = Not Applicable

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: Partially exempt chemical substance termed Petroleum Process Stream

TSCA STATUS: All components of this product are included in inventory, exempt, or notified

CLEAN AIR ACT

40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: NA = Not Applicable

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: NA = Not Applicable

REGULATIONS

STATE REGULATIONS: New Jersey Right-To-Know Act requires labels at a private employers facility to bear the name: Petroleum Oil (Lubricating Oil) and the individual component CAS number and component name for this product

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.

RCRA STATUS: Not listed or controlled

CLEAN WATER ACT: This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or conduits leading to surface waters must be reported to the EPA's National Response Center at 800-424-8802.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Not listed or controlled

DOMESTIC SUBSTANCE LIST (INVENTORY): All components of this product are included in inventory, exempt, or notified

MEXICO Not Available

GENERAL COMMENTS: All components of this product are included in inventory, exempt, or notified: USA TSCA, European EINECS, Australian AICS, Canadian DSL, China IECSC, Japanese ENCS, Korean KECL, Philippines PICCS

16. OTHER INFORMATION

APPROVED BY: EHS DEPT

PREPARED BY: ewr

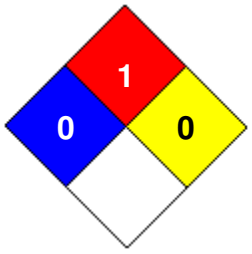
INFORMATION CONTACT: fluids@lesker.com

REVISION SUMMARY: This MSDS replaces the 12/5/2011 MSDS.

HMIS RATING

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

NFPA CODES



MANUFACTURER DISCLAIMER:

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