

**VIRGINIA TKO REFRIGERATION OIL ACID TEST KIT**  
Material Safety Data Sheet

**SECTION I - COMPANY IDENTIFICATION**

**PRODUCT:** VIRGINIA TKO REFRIGERATION OIL TEST KIT

**CAT. NO.:** TKO

**MANUFACTURED BY:**  
Virginia KMP Corporation  
4100 Platinum Way  
Dallas, Texas 75237

**TELEPHONE NUMBERS:**  
Office: 1-(214) 330-7731  
Emergency Only: 1-(800) 424-9300

**SECTION II - HAZARDOUS INGREDIENTS**

**OSHA Hazardous Components (29 CFR 1910.1200)**

**EXPOSURE LIMITS: 8 HR. TWA**  
**OSHA PEL** **ACGIH TLV**

Toluene (CAS# 108-88-3)

CL	100 ppm	100 ppm
PK	300 ppm	
	500 ppm / 10 min / 8 hr shift	
STEL	150 ppm	STEL 150 ppm
	1000 ppm	1000 ppm

Ethyl alcohol (64-17-5)

**SECTION III - HAZARDS IDENTIFICATIONS**

**EMERGENCY OVERVIEW:** DANGER! Flammable liquid. Inhalation may cause severe narcotic effect.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:** Causes irritation of respiratory tract, nervous system depression, headaches, dizziness, staggering gait, confusion, unconsciousness and coma. Aspiration causes rapidly developing pulmonary edema.

**EYE CONTACT:** Irritation develops immediately after contact with liquid or vapor.

**SKIN CONTACT:** Irritation develops after prolonged contact with liquid or vapor. Aggravates pre-existing skin disorders.

**INGESTION:** Causes gastrointestinal distress, irritation and possible nausea. May cause CNS depression.

**CHRONIC Effects:** Kidney and liver damage; bone marrow and blood changes.

**NOTE:** Ethyl alcohol is on IARC list only as beverage.

**CARCINOGENICITY:** LISTED IN NTP? No IARC? No OSHA Regulated? No

**SECTION IV - FIRST AID MEASURES**

**INHALATION:** Remove victim to fresh air and, if needed, immediately begin artificial respiration. Give oxygen if breathing is labored. Get emergency medical help. Contact a physician immediately.

**EYE CONTACT:** Flush eyes with water for 15 minutes. Get medical attention if symptoms develop and persist.

**SKIN CONTACT:** Flush with water or soap and water for 15 minutes or until all traces have been removed. Seek medical attention if symptoms develop and persist.

**INGESTION:** Do not induce vomiting. Rinse mouth out with water. Get immediate medical attention.

**SECTION V - FIRE FIGHTING MEASURES**

**FLASHPOINT (TEST METHOD):** 4.4 C (ASTMD92), 40 F

**FLAMMABLE LIMITS:** LOWER: 1.4% UPPER: 7.0%

**AUTOIGNITION TEMPERATURE:** ND

**GENERAL HAZARD:** Flashback along vapor trail possible, vapor may explode if in contained area.

**FIRE FIGHTING INSTRUCTIONS:** Approach fire from upwind side. Avoid breathing smoke, fumes, mist or vapors on the downwind side. Firefighters wear protective clothing and self contained breathing apparatus. Cool exposed containers with water.

**EXTINGUISHING MEDIA:** Alcohol foam, CO<sub>2</sub>, dry chemical.

**HAZARDOUS COMBUSTION PRODUCTS:** Acrid smoke, irritating fumes, CO, CO<sub>2</sub>.

**SECTION VI - ACCIDENTAL RELEASE MEASURES**

**LAND SPILL:** Eliminate all ignition sources. **SMALL SPILLS:** Pick up with absorbent materials and place in non-leaking containers; seal tightly for proper disposal or reuse. **LARGE SPILLS:** Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels.

**WATER SPILL:** Notify proper authorities.

Clean up leaks/spills immediately to prevent soil or water contamination.

**SECTION VII - HANDLING AND STORAGE**

**HANDLING:** Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in section IV. Launder contaminated clothing before reuse.

**STORAGE:** Store in a cool place away from ignition sources. Store away from oxidizers. "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 sealed and promptly returned to a drum reconditioner, or disposed of properly.

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## SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust ventilation is recommended.

**PERSONAL PROTECTION:** NIOSH approved respirator when exposure limits are exceeded, chemical resistant gloves, chemical goggles or full face shield. Boots, aprons, drench showers, eye wash as needed for protection against spills and/or splashes.

## SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

**VAPOR PRESSURE:** 19 mmHg  
**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** 0.86  
**SOLUBILITY IN WATER:** Partially  
**pH:** NA

**BOILING POINT:** 172 F

**APPEARANCE & ODOR:** Clear liquid, solvent odor.

**VAPOR DENSITY (Air=1):** 1.6  
**EVAPORATION RATE (BuAc=1):** <1  
**VOC (G/L):** 860  
**FREEZING POINT:**

## SECTION X - STABILITY AND REACTIVITY

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** Heat and flames, lack of ventilation.

**MATERIALS TO AVOID:** Oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** From combustion: Acrid smoke, irritating fumes, CO, CO<sub>2</sub>.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION XI - TOXICOLOGICAL INFORMATION

Ethyl alcohol	TDL <sub>o</sub> :	41 g/kg	(oral - wmn)
	TDL <sub>o</sub> :	50 g/kg	(oral - man)
	LDL <sub>o</sub> :	1400 mg/kg	(oral - human)
	LC50:	20000 ppm/10 hr	(inh - rat)
Toluene		300 ppm	(eye - human)

## SECTION XII - ECOLOGICAL INFORMATION

Dangerous to aquatic life at high concentrations.	Ethyl alcohol	250 ppm / 6 hr / goldfish / lethal / fresh water
	Toluene	1180 mg/L / 96 hr / sunfish / TLm / fresh water

## SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose as hazardous waste. Classification and documentation is required before disposal. Follow all local, state and federal regulations.

## SECTION XIV - TRANSPORTATION INFORMATION

**PROPER SHIPPING NAME:** Flammable liquids, n.o.s., (toluene ethanol), 3, UN1993, PG II

**HAZARD CLASS:** 3

**IDENTIFICATION NUMBER:** UN1993

**DOT Emergency Guide #:** 128

**Reportable Quantity (RQ):** 230 gallons (toluene)

**International:** Flammable liquids, n.o.s., (toluene ethanol), 3.2, UN1993, PG II, IMDG 3230

## SECTION XV - REGULATORY INFORMATION

**TSCA (Toxic Substance Control Act):** Components of this product are listed on the TSCA Inventory.

**CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):** Reportable quantity is 230 gallons (toluene). Contact local authorities for other reporting requirements.

**SARA TITLE III (Superfund Amendments and Reauthorization Act):**

Section 313:	Toluene	(CAS# 108-88-3)	40-60%
	Ethyl alcohol	(CAS# 64-17-5)	40-50%

**CALIFORNIA PROPOSITION 65:** Not listed.

## SECTION XVI - OTHER INFORMATION

State Right-to-Know Programs: MA, NJ, PA

NFPA Ratings

Health:	2
Flammability:	3
Reactivity:	0

HMIS Protective Equipment: X See your supervisor

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