



## MATERIAL SAFETY DATA SHEET

**Manufacturer:**  
**Radco Industries, Inc.**  
PO Box 305 LaFox,  
IL 60147 USA

Website: [www.Xceltherm.com](http://www.Xceltherm.com)

**Emergency Phone Numbers:**

For chemical emergency, spill, leak, fire exposure,  
accident or medical emergency, call CHEMTREC:  
North America 1-800-424-9300  
International +1 703-527-3887

For shipping emergency or off-hours rush orders  
call: 1-630-232-7966 or 1-630-336-6728

Product Name: **XCEL THERM<sup>®</sup> LV-1** Heat Transfer Fluid  
Effective Date: 12/10/99 Updated: 2/9/2010

### **I. INGREDIENTS:**

Diphenyl Oxide (phenyl ether)	CAS# 000101-84-8	>50%
1,1-Diphenylethane	CAS# 000612-00-0	<50%
1,2-Diphenylethane	CAS# 000103-29-7	<1%
Diphenylmethane	CAS# 000101-81-5	<1%

No component of this product is currently listed as a potential carcinogen by IARC, NTP, or OSHA.

### **II. PHYSICAL DATA:**

Boiling Point @ 760mm Hg:	496°F, 258°C
Crystallizing Point:	45°F, 7.2°C
Density @ 77°F/25°C:	8.84 lbs/gal
Specific Gravity @ 77°F/25°C:	1.060
Average Molecular Weight:	171.9
Appearance:	Water White Liquid
Odor:	Slight Aromatic Odor

### **III. FIRE AND EXPLOSION HAZARD DATA:**

Flash Point (minimum)	251°F, 122°C (COC)
Fire Point (minimum)	263°F, 128°C (COC)
Auto-ignition Temperature	1120°F, 604°C
Flammable Limits:	LFL: 0.74%
	UFL: 2.28%

Extinguishing Media: Water fog, Foam, CO<sub>2</sub>, Dry Chemical.

**Fire Fighting Procedures:** Firefighters should wear normal protective equipment and positive-pressure self-contained breathing apparatus. Water or foam may cause frothing below the surface of the liquid and may turn to steam. Water can be used to cool fire-exposed containers, to protect personnel, and to disperse vapors and spills.

**Usual Fire Fighting Procedure:** COMBUSTIBLE as same as ordinary mineral lubricating oil.

XCEL THERM® LV-1/MSDS  
RADCO INDUSTRIES, INC.  
P.O. Box 305  
LaFox IL 60147

#### IV. REACTIVITY DATA:

**Stability:** Stable. Excellent thermal stability characteristics at typical use temperatures.

**Materials to avoid:** Exposure to materials which are highly oxidizing should be avoided.

**Hazardous Polymerization:** Does not occur.

---

#### V. ENVIRONMENTAL AND DISPOSAL INFORMATION:

Action to take for spills/leaks: Dike to contain spill. Recover if possible. Small spills can be covered with absorbent material.

Disposal Method: Waste/Off-specification product should be reprocessed, incinerated or disposed of in accordance with applicable federal, state and local regulations. This material should not be dumped, spilled, rinsed, or washed into sewers or public waterways.

---

#### VI. HEALTH HAZARD DATA:

**Emergency Overview:** Direct contact may cause skin and eye irritation.

**Eye:** May cause transient eye irritation (tears, blurred vision, redness).

**Skin Contact:** Short single exposure not likely to result in the material being absorbed through the skin in harmful amount. Prolonged exposure may cause skin irritation. The dermal LD<sub>50</sub> has not been determined.

**Ingestion:** Single dose oral toxicity is low. The LD<sub>50</sub> for rats is >2000mg/kg. Ingestion of large amounts may cause headache, vomiting, and diarrhea. If aspirated (liquid enters the lung), may cause chemical pneumonia, a condition caused by petroleum and petroleum-like solvents.

**Inhalation:** Excessive exposure may cause central and peripheral nervous system depression, with possible effects such as: increase in frequency of respiration, headache, dizziness, lack of coordination, nausea, loss of appetite, and loss of consciousness.

XCEL THERM® LV-1/MSDS  
RADCO INDUSTRIES, INC.  
P.O. Box 305  
LaFox IL 60147

## VII. FIRST AID MEASURES:

**Eyes:** Flush immediately with water for at least 15 minutes.

**Skin:** Remove all contaminated clothing. Immediately wash off affected area with soap and water. Wash contaminated clothing before reuse.

**Ingestion: Do not induce vomiting.** Call physician immediately.

**Inhalation:** Remove to fresh air if effects occur. Call physician immediately.

**NOTE TO PHYSICIAN:** No specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient.

## VIII. HANDLING AND STORAGE PRECAUTIONS:

Exposure guidelines: Diphenyl oxide (phenyl ether): ACGIH TLV is 1 ppm; STEL is 2 ppm. OSHA PEL is 1 ppm.

**Ventilation:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**Respiratory Protection:** Avoid breathing vapor or mist. Use NIOSH/MSHA approved equipment when airborne exposure limits are exceeded. Full faceshield equipment is recommended and, if used, replaces need for full face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for given application. The respirator use limitations specified by NIOSH/MSHA or the manufacturer must be observed. High airborne concentrations may require use of self-contained breathing apparatus. Respiratory protection programs must be in compliance with 29 CFR 1910.134.

**Skin Protection:** For brief contact, no precautions other than clean body-covering clothing should be needed. Use impervious gloves when prolonged or frequently repeated contact could occur, such as during vent header maintenance. Consult glove manufacturer to determine appropriate type glove for given application.

**Eye Protection:** Wear chemical goggles/safety glasses and have eye baths available where there is significant potential for eye contact.

**Storage:** Store in cool, well ventilated area, far from open flames and areas where danger of fire exists.

---

## IX. TRANSPORT INFORMATION:

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

XCEL THERM® LV-1/MSDS  
RADCO INDUSTRIES, INC.  
P.O. Box 305  
LaFox IL 60147

**IX. TRANSPORT INFORMATION: Continued**

US DOT Classification: Not a Hazardous Material for DOT shipping.

---

**X. REGULATORY INFORMATION:**

**SARA 313 Information:** This product does not contain a substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**CERCLA/SUPERFUND:** This product contains no Reportable Quantity (RQ) substances that are currently listed under 40 CFR Part 302.4.

**TOXIC SUBSTANCES CONTROL ACT:** The ingredients of this product are all listed on the TSCA Inventory list.

California Proposition 65: Not Applicable.

Workplace Hazard Identification System: (Health: 2 ) (Fire: 1) (Reactivity: 0)

---

**XI. CANADIAN REGULATIONS:**

**WHMIS Information:** The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: D2B.

**Canadian TDG information:** For guidance, the Transportation of Dangerous Goods Classification for this product is: Not regulated.

---

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION STATED IS TO THE BEST OF RADCO'S KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE TO ITS ACCURACY, RELIABILITY, OR COMPLETENESS, AND RADCO DOES NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION. FINAL DETERMINATION OF SUITABILITY OF ANY MATERIAL IS THE SOLE RESPONSIBILITY OF THE USER. ALL MATERIAL SHOULD BE USED WITH CAUTION TO GUARD AGAINST UNKNOWN HAZARDS. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, RADCO DOES NOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

® Indicates a trademark of **Radco Industries, Inc.**