



I. PRODUCT IDENTIFICATION

Manufacturer's Name: Paratherm Corporation
Address: 4 Portland Road
West Conshohocken, PA 19428 USA

Trade Name: Paratherm OR®
Revision Date: January 15, 2004
Emergency Telephone No.: 610-941-4900
Chemtrec (USA): 800-424-9300
Chemtrec (outside USA): 703-527-3887

CAS Number: 8042-47-5	
TSCA Inventory Status: All Components Included	
NFPA Hazard Identification	
Degree Of Hazard	Hazard Ratings
Health: 0	0-Least
Fire: 1	1-Slight
Reactivity: 0	2-Moderate
	3-High

II. INGREDIENTS

COMPONENT NAME	CAS NUMBER	HAZARDOUS IN BLEND	PERCENTAGE		COMPONENT EXPOSURE LIMITS (OSHA PEL & ACGIH TLV)
			Min.	Max.	
Hydrocarbon	8042-47-5	No	90	99.5	None Established (see item III below)
Proprietary Additives	Trade Secret	No	0.5	10	None Established

III. HEALTH EFFECT INFORMATION

ACUTE EFFECTS

EYE CONTACT

Paratherm OR® heat transfer fluid may be slightly irritating to the eyes upon direct contact.

SKIN CONTACT

Paratherm OR fluid is not expected to cause skin irritation upon direct single or repeated and prolonged contact. However, products with similar chemical composition applied to the skin of laboratory animals resulted in minimal to slight dermal irritation.

INHALATION

The vapor pressure of Paratherm OR fluid is very low and is not expected to present an inhalation hazard under normal operating conditions. The permissible exposure limit (PEL) and threshold limit value (TLV) for the fluid as oil mist is 5 mg/m³. Exposures to concentrations below 5 mg/m³ appear to be without significant health risk.

INGESTION

Ingestion is relatively non-toxic unless aspiration occurs. Paratherm OR fluid has laxative properties, and abdominal cramps and diarrhea may result if ingested.

CHRONIC EFFECTS

Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage — which may be fatal. Signs of lung involvement include increased respiration rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time of aspiration. Gastrointestinal discomfort may develop, followed by vomiting and a further risk of aspiration.

CARCINOGENICITY

NTP: No
IARC: No
OSHA: No

IV. EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT

Immediately flush eyes with large amounts of water, and continue flushing for 15 minutes. If fluid is hot, treat for thermal burns and take victim to hospital immediately.

SKIN CONTACT

Remove contaminated clothing. If fluid is hot, submerge injured area in cold water. If victim is severely burned, take to a hospital immediately.

INHALATION

Paratherm OR fluid has a low vapor pressure and is not expected to present an inhalation hazard under ambient conditions. If a vapor or

mist is generated when the fluid is heated or handled and the mist is inhaled, remove victim from exposure. If breathing has stopped or is irregular, administer artificial respiration and supply oxygen if it is available and seek medical attention.

CAUTION: Do not use compressed oxygen in hydrocarbon atmospheres.

INGESTION

May act as a laxative. Do not induce vomiting due to possible aspiration. If vomiting occurs, lower head below knees to avoid aspiration. Seek immediate medical attention.

V. PERSONAL HEALTH PROTECTION INFORMATION

EYE PROTECTION

Eye protection is not required under conditions of normal use. If the fluid is handled such that it could be splashed into the eyes, wear plastic face shield or splash-proof safety goggles.

SKIN PROTECTION

No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious synthetic rubber clothing (boots, gloves, aprons, etc.) over parts of the body

subject to exposure. If handling hot fluid, use insulated protective clothing (boots, gloves, aprons, etc.)

RESPIRATORY PROTECTION

Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the fluid is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified.

CAUTION: Do not use compressed oxygen in hydrocarbon atmospheres.

V. PERSONAL HEALTH PROTECTION INFORMATION (continued)

VENTILATION

If vapor or mist is generated when the fluid is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

OTHER

Consumption of food and beverages should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking or smoking.

VI. FIRE PROTECTION INFORMATION

Flash Point	350°F (177°C)	(ASTM D-92, coc)
Fire Point	395°F (202°C)	(ASTM D-92, coc)
Autoignition Temperature	>650°F (>343°C)	(ASTM E-659)

FLAMMABLE LIMITS IN AIR (% BY VOL.)	LOWER: UPPER:	No data No data
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EXTINGUISHING MEDIA

Use dry chemicals, foam, water-fog, or carbon dioxide.
Do not use water on oil fires.

SPECIAL FIRE FIGHTING PROCEDURES

Water may be ineffective — and may spread fire. Water can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam because frothing may occur — especially if water or foam is sprayed directly into containers of hot, burning liquid.

UNUSUAL FIRE AND EXPLOSIVE CONDITIONS

Dense smoke may be generated while burning. Products of combustion such as water vapor, carbon monoxide, carbon dioxide and other oxides will be generated.

VII. REACTIVITY DATA

Stability (Thermal, Light, Etc.):	Stable
Conditions to Avoid:	None
Hazardous Polymerization:	Will not occur

Incompatibility (Materials to Avoid):	May react with strong oxidizing agents
Hazardous Decomposition Products:	If burned, will produce carbon dioxide and carbon monoxide

VIII. ENVIRONMENTAL PRECAUTIONS

STEPS TO BE TAKEN IF FLUID IS RELEASED OR SPILLED

Consult Health Effect Information in Section III, Personal Health Protection Information in Section V, Fire Protection Information in Section VI, and Reactivity Data in Section VII. Notify appropriate authorities of spill. Contain spill immediately and do not allow it to enter sewers or watercourses. Remove all sources of ignition. Absorb fluid with appropriate inert materials such as sand, clay and absorbent socks. Scoop up liquid if possible and remove. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

WASTE DISPOSAL METHOD

Disposal must comply with federal, state and local regulations. The fluid, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. **Caution:** If regulated solvents are used to clean up spilled fluid, the resulting waste mixture will likely be regulated. Department of Transportation (DOT) regulations will apply if material is spilled during transport. Waste material may be landfilled or incinerated at an approved facility. However we strongly recommend that materials be recycled wherever possible. The Paratherm **OR** heat transfer fluid — as supplied — is not regulated by RCRA as hazardous waste.

IX. MISCELLANEOUS

HANDLING AND STORAGE REQUIREMENTS

Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials. Paratherm **OR**® is not classified as hazardous under DOT regulations. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106— Flammable and combustible liquids.

ADDITIONAL INFORMATION

TSCA Inventory Status: Included

WHMIS CLASSIFICATION

Not controlled.

SARA Title III: Paratherm **OR** is not subject to the reporting requirements of section 313 of Title III of the Superfund Amendment & Reauthorization Act of 1986, and 40 C.F.R. part 372.

CERCLA: If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

Clean Water & Oil Pollution Acts: Paratherm **OR** is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills that produce a visible sheen on either surface water, or in waterways/sewers that lead to surface water, must be reported to the National Response Center at 800-424-8802.

Clean Air Act: Paratherm **OR** is not classified as a Hazardous Air Pollutant (HAP) under Section 112 of the Clean Air Act.

X. PHYSICAL PROPERTIES

BOILING POINT	631°F, 333°C (10% Fraction)
POUR POINT	-35°F
APPEARANCE	Transparent, Water-White
ODOR	Odorless
VAPOR PRESSURE	<1 mm Hg @ 70°F
SOLUBILITY	Negligible in water. Soluble in hydrocarbons.

PERCENT VOLATILE	Nil @ ambient temperature
VAPOR DENSITY (AIR=1)	>1
EVAPORATION RATE (EE=1)	<1
TYPICAL SPECIFIC GRAVITY	0.8845
AVE. MOLECULAR WEIGHT	360

XI. SHIPPING INFORMATION

Not regulated by D.O.T., no placarding required.

Note: We present the information and recommendations in this bulletin in good faith and believe them to be correct. However, Paratherm Corporation makes no representations as to accuracy or completeness. We supply this information on the condition that the user determine the

suitability of product for each specific application. We warrant that the thermal fluid conforms to the specifications in this bulletin, but make no further warranty, expressed or implied, including the warranties of merchantability or fitness for a particular purpose.

