



# PARATHERM - OR<sup>®</sup> HEAT TRANSFER FLUID

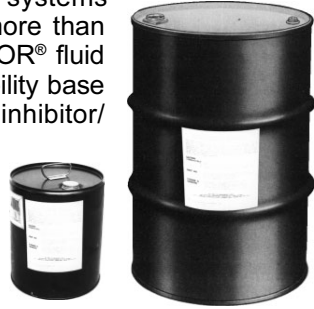
## OXIDATION RESISTANT, NON-FOULING, LONGER LASTING FORMULA

**BETTER!**

**- FEATURES -**

**LASTS UP TO TWICE AS LONG AS PARATHERM NF**

PPE OR<sup>®</sup> sludge-resistant Heat Transfer Fluid has substantial oxidation resistance and extended service life. This zero-pressure fluid provides precise, uniform temperature control to 550°F in closed-loop thermal oil systems where the heat transfer fluid is more than occasionally exposed to air. PPE OR<sup>®</sup> fluid is comprised of a unique high-stability base plus high-performance oxidation inhibitor/stabilizer. Performance of the PPE OR<sup>®</sup> fluid is particularly impressive under the same grueling conditions that quickly cause severe oxidation, and sludge formation in conventional heat transfer fluids.



- Will not oxidize or form sludge, even with prolonged contact with air.
- Highly efficient heat transfer to 550°F.
- Low viscosity requires less energy to pump it. Uses lower horsepower pumps.
- Excellent BTU/GPM capabilities.
- Stable Non-carbonizing, Non-corrosive.
- Fluid fouling: OR<sup>®</sup> will not cause hard carbon formation on heated surfaces.
- OR<sup>®</sup> is completely Non-toxic. It is certified by the FDA and USDA for use with food and pharmaceuticals, and carries the USDA's incidental food contact rating.
- Colorless, tasteless & odorless.
- Non-irritating to skin and eyes.
- High flash point (350°F).
- Insoluble with water.
- Contains virtually no aromatics, heavy metals, or compounds of sulfur or nitrogen.
- Disposal: can be combined with other used or contaminated lube oils for recycling. Check your local, state, or federal regulations first.

| PART NUMBER | CONTAINER SIZE | QUANTITY PRICES |              |
|-------------|----------------|-----------------|--------------|
|             |                | 1               | 2+           |
| OR0505      | 5 GAL.         | \$170.00 ea.    | \$155.00 ea. |
| OR0555      | 55 GAL.        | 1,290.00 ea.    | 1,235.00 ea. |

Approx. Shipping Weights: 5 Gal. = 40 lbs. / 55 Gal. = 440 lbs.

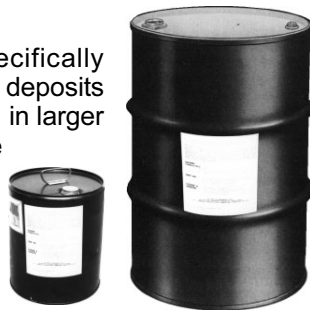


# PARATHERM - LC<sup>™</sup> SYSTEM CLEANER FLUID

## FOR CLEANING LARGE SYSTEMS - ON THE FLY

**- FEATURES -**

PPE LC<sup>™</sup> System Cleaning Fluid is specifically formulated to dissolve and suspend sludge deposits that can reduce flow, and thus heat transfer, in larger continuously-operated systems. Compatible with mineral oil based fluids, it operates while the system does, eliminating the downtime involved with flushing fluids or chemical cleaning agents.



- Add to your existing fluid and clean while your system runs.
- Clean any system with minimal downtime
- Dissolves sludge as system runs
- Restores system performance
- Compatible with any mineral-oil based fluid
- Max. recommended use temperature 550°F

### How Much LC<sup>™</sup> Cleaner To Use

Time cleaner will remain in your system:

- less than 2 weeks ..... 10%
- 2 to 4 weeks ..... 5%
- more than 4 weeks ..... 3%

Approx. Shipping Weights:  
5 Gal. = 40 lbs.  
55 Gal. = 440 lbs.

| PART NUMBER | CONTAINER SIZE | QUANTITY PRICES |              |
|-------------|----------------|-----------------|--------------|
|             |                | 1               | 2+           |
| LC0801      | 1 GAL.         | \$90.00 ea.     | \$80.00 ea.  |
| LC0805      | 5 GAL.         | 395.00 ea.      | 365.00 ea.   |
| LC0855      | 55 GAL.        | 3,140.00 ea.    | 3,020.00 ea. |

### Instructions for LC<sup>™</sup> Fluid Use

1. Install a 60 mesh screen in the Y-strainer to catch any large lumps that break loose.
2. Drain the equivalent amount of fluid from the system before adding the LC cleaner.
3. Add LC<sup>™</sup> cleaner slowly using a positive displacement transfer pump and hoses of appropriate temperature range. Either pump LC<sup>™</sup> cleaner liquid directly into system (near pump suction if possible) or pump into expansion tank and drain into system.
4. Allow cleaner to circulate until all loops are at operating temperature. Run system normally. Minimum suggested time is 3 weeks, maximum time is 1 year.
5. Clean Y-strainer screen as necessary.
6. To drain cleaner and fluid, shut off heater but allow pump to circulate until system temperature is cool enough to handle (180 to 200°F). Do not turn off pump and allow system to cool as this will permit particles to settle out and contaminate the new fluid.
7. Drain system with pump running. Continue to run pump until it begins to cavitate or the low pressure switch shuts it off.
8. Continue draining as quickly as possible. Any delay will allow sludge to settle out in the piping where it will contaminate the new fluid.
9. Fill system with Paratherm fluid or a compatible brand and restart system.
10. One week after startup, send sample to fluid supplier for testing.

*NOTE: The cleaner can be used to clean the expansion tank if the heater is equipped with a warm-up valve. Make sure the tank is purged with nitrogen while the warm-up valve is open.*



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