

# Paratherm™ LC

## Heat Transfer System Cleaner



Mineral Oil Compatible | Additive Cleaner for Large Systems | Minimal Downtime

### OVERVIEW

Paratherm™ LC is a proprietary cleaning agent specifically formulated to suspend & dissolve sludge deposits that can reduce flow & efficiency in larger continuously operated systems. This unique additive formula cleans the system while it runs, eliminating the need for any flushing fluids or chemical cleaners.

### OPERATING RANGE



52°F (11°C) to 550°F (288°C)

### PERFORMANCE FEATURES

- Restores system performance
- Suspends/dissolves sludge during normal system operation
- Unique formula compatible with all mineral oil fluids
- Additive cleaner means no downtime, and no flushing step

### TYPICAL INDUSTRIES

- Asphalt Processing & Storage
- Engineered Wood & Building Materials
- Chemical Processing
- Industrial Drying Processes

### RECOMMENDED 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 LC cleaner.
3. Add LC cleaner slowly using a positive displacement transfer pump and hoses of appropriate temperature range. Either pump LC 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.
5. Clean Y-strainer screen as necessary for duration of cleaning cycle.
6. To drain cleaner and fluid, shut off heater but allow pump to circulate until system temperature is cool enough to handle (< 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 normally
10. One week after startup, send sample to fluid supplier for testing.

**Suggested treat rate is 3-12% of system volume, depending on the degree of fouling. System cleaning should be preceded by analysis of the fluid to confirm suitable treat rate.**

**Minimum suggested circulating time is 3 weeks, maximum time is 1 year.**

## ADDITIONAL PRODUCT HIGHLIGHTS

Paratherm LC has been used successfully for many years to restore performance in fouled systems. Paratherm LC works very well to break up and suspend sludge deposits coating system surfaces but relies on flow for efficacy. If there is no flow to certain parts of the system, then the cleaner cannot contact the deposits to break them up. In no flow situations, usually mechanical cleaning or pipe replacement is necessary to restore performance. Once the cleaning cycle is completed, the drained mixture can be disposed of under normal protocol.

## CUSTOMER SUPPORT

Paratherm specializes in the supply and support of heat transfer fluid technologies. As such, our business is structured to meet the unique needs of our customers. Multiple distribution sites and 24/7 response ensure product is at your facility when you need it with no minimum order quantity. We provide expert support by phone, email, or on-site visits when necessary.

## EXTENDING FLUID LIFETIME

When Paratherm fluids are used as recommended they can provide many years of reliable service. Systems using Paratherm fluids should be designed and installed by qualified engineers and should be maintained as any other critical production asset. Fluid oxidation is the leading cause of the most serious maintenance issues associated with closed-loop heat transfer systems—including cold spots, heater coking, plugged pressure sensors and ultimately fluid gelling. Paratherm recommends installation of a nitrogen blanket on the expansion tank to prevent oxidation of the fluid. All systems may benefit from side-stream filtration to promote long-term fluid and system reliability.

## FLUID ANALYSIS SERVICES

Paratherm offers a comprehensive fluid monitoring service to help keep systems running at their best. Our state-of-the-art laboratory is certified to ISO 9001:2015 and well-equipped to run all critical tests. Annual testing is recommended and can identify system issues before they become catastrophic. The fluid in new systems should be tested within 9 to 12 months of start-up. New fluid in existing systems should be tested within the first month of operation to establish a base line for future testing, and annually thereafter.

## REPLACING FLUID

Replacement should be preceded by analysis of the fluid to determine if cleaning or flushing of the system is recommended prior to introducing new heat transfer fluid. Newly commissioned systems typically do not require cleaning before filling. Paratherm recommends installation of a Y-strainer with a minimum 60-mesh screen up-stream of the pump to catch any residues from manufacturing and construction of system components.

## FLUID STORAGE

Drums and totes should be stored indoors to prevent environmental contamination. If sealed drums must be left outdoors, provisions should be made to prevent water from pooling on their tops. While unopened totes are considered weatherproof, Paratherm recommends they not be stacked when stored outdoors. If the fluid is below its minimum pumpable temperature, the containers may be moved indoors to warm up before charging into the system. Refer to the product safety data sheet (SDS) for additional handling and storage recommendations.

The information and recommendations in this literature are made in good faith and are believed to be correct as of the below date. The user or specifier should independently determine the suitability and fitness of Paratherm Heat Transfer Fluids for use in your specific application. We warrant that its products conform to Paratherm's manufacturing specifications as of the date of delivery. Because our assistance is furnished without charge, and because we have no control over the fluids end use or the conditions under which it will be used, we make no other warranties – expressed or implied, including the warranties of merchantability or fitness for a particular use or purpose (recommendations in this bulletin are not intended nor should be construed as approval to infringe on any existing patent). The user's exclusive remedy, and Paratherm's sole liability is limited to refund of the purchase price or replacement of any product proven to be otherwise than warranted. Paratherm will not be liable for incidental or consequential damages of any kind.