

Recommended heat transfer fluids

Heat transfer systems manufactured by Mokon are thoroughly tested prior to shipment for leaks, component operation, and accuracy (calibration).

All Mokon heat transfer systems are tested using Mokon's DELF600 heat transfer fluid.

NOTE: The use of any heat transfer fluid other than the ones listed below may void your warranty. Consult the Mokon service department with questions on fluid selection.

When operating the Mokon system, routine fluid samples should be taken and analyzed regularly. These samples can help determine your unique change point. A fluid sample should be taken from a flowing line and cooled below 100°F (38°C) before placing in a clean sample container and sent to the heat transfer manufacturer for analysis. The information gathered from the sample can then be useful in developing a heat transfer fluid maintenance program.

Mokon recommends the following heat transfer fluids for use in Mokon systems. A short description of each fluid offered including the recommended applications for the fluids.

Mokon's heat transfer fluids:

Mokon's heat transfer fluids last longer and help keep your system cleaner...which means longer life for parts like pumps and rotary seals!

Mokon's heat transfer fluids are:

- ❖ Extremely stable
- ❖ Highly refined using naturally resilient base stocks like, severely hydro treated paraffinic oils
- ❖ Enhanced with a proprietary blend of additives.

DELF450 - engineered for applications between 30°F and 450°F (-1 to 232°C) offering an excellent alternative to costly synthetics and aromatic fluids. The fluid delivers superior resistance to sludging, a problem plaguing most other fluids, and defends against extreme oxidation.

DELF600 - rated to 600°F (315°C), it contains the industry's most aggressive blend of additives specifically engineered to withstand the extreme oxidation environments in open systems and give unsurpassed levels of protection and service life. All Mokon HTF systems are tested using this fluid!

DELF450FG and **DELF600FG** - are engineered to comply with the demands of food grade applications and meet USDA requirements for incidental food contact (H1) and 21CFR1783570, and are NSF registered.

DELF 450 & 600 and DELF 450FG & 600FG may be used safely in the Mokon HTF 350, 500, 600, and HF Series systems.

Other heat transfer fluids suitable for use with Mokon's systems:

Multitherm

PG-1 is a food grade heat transfer fluid for use up to 600°F (316°C). PG-1 meets specifications of 21CFR72.878, which covers the use of white mineral oils in food applications according to the limits and conditions of the regulations. PG-1 is Kosher certified and rated HT-1 for incidental contact by NSF.

IG-4 for use in systems up to 600°F.

Paratherm

NF is formulated for service up to 600°F (316°C). NF fluid provides excellent heat transfer and is low in viscosity.

HE is a high flash and fire point heat transfer fluid is rated for an optimal service range of 150°F - 600°F (66°C - 316°C).

Petro-Canada Products

Calflo FG for use in closed loop, non-pressurized, indirectly heated, liquid phase heat transfer systems with operating temperatures up to 620°F (326°C). It is accepted by the Canadian Department of Agriculture and approved USDA H1 for incidental food contact.

Calflo HTF is recommended for use in heat transfer systems with operating temperatures up to 620°F (326°C) and film temperatures up to 650°F (343°C). Calflo HTF is a unique heat transfer fluid that combines the thermal efficiency and cleanliness of paraffinic hydrocarbon with the high temperature stability of a chemical synthetic.

Solutia Inc.

Therminol 66 heat transfer fluid is designed for use in non-pressurized/low pressure, indirect heating systems with maximum bulk temperatures up to 650°F (343°C) and film temperatures up to 705°F (374°C).

Duratherm

Duratherm 450 – Heat transfer fluid rated to 450°F.

Duratherm 600 – Heat transfer fluid rated to 600°F, used in a variety of applications.

Duratherm Lite - Heat transfer fluid with the same physical properties as Duratherm 600 but formulated with a lighter dose of additives. Duratherm Lite is economically ideal for applications that are prone to fluid loss or attrition due to equipment change.

Duratherm FG is rated for use up to 620°F and is engineered and manufactured to comply with the demands of food grade applications. Duratherm FG meets USDA requirements for incidental food contact (H1) and meets the requirements of 21CFR1783570 and is NSF registered.

Recommended system cleaning fluids

NOTE: The use of any system cleaning fluid other than the ones shown below may void your warranty. Consult the Mokon service department with questions on fluid selection.

The use of these fluids is done at the owners own risk. Mokon assumes no responsibility for the effectiveness or the liability for damages that may occur while using these fluids. Please consult the manufacturer's instructions for safe and proper use prior to using any of the cleaning fluids listed in this manual.

*When operating the Mokon HTF system, routine fluid samples should be analyzed. Fluid samples for analysis should be taken regularly. These samples can help determine your unique change point. A fluid sample should be taken from a flowing line and cooled below 100°F (38°C) before placing in a clean sample container and sent to the heat transfer manufacturer for analysis. The information gathered from the sample can then be useful in developing a heat transfer fluid maintenance program.

Mokon's heat transfer system cleaner:

The industry's first heat transfer system cleaner that provides full production while cleaning!

Mokon's DELFClean - a long life, preventative maintenance and light duty system cleaner that is capable of functioning as a long-term heat transfer fluid up to 550°F (288°C). This fluid is odorless and easily handles long term operation while seamlessly allowing production to continue uninterrupted for a complete oil cycle.

Other cleaners suitable for use with Mokon's systems:

Multitherm

Multitherm PSC cleaning fluid is designed for use in general maintenance of larger heat transfer fluid systems. PSC is formulated to be compatible with all MultiTherm heat transfer fluids as well as most others so that small residual amounts left in the system will not cause a problem.

Paratherm

Paratherm SC® system cleaning liquid is formulated to dissolve and suspend sludge and carbon lumps frequently produced in hot oil temperature control units where petroleum or glycol-based heat transfer fluids have been used.

Duratherm

Duratherm Duraclean is a preventative maintenance and light duty system fluid up to 550°F.

Duratherm's Duraclean Ultra is a high performance, fast acting and High flash point terpene solvent. A unique combination of terpene, alcohols, penetrants, and surfactants designed to remove grease, oil, and carbon deposits. This fluid can be run to 150°F max. Duraclean Ultra is environmentally safe, low toxicity, biodegradable, and comes from a renewable natural resource.