

# TMC LC-25 HEAT TRANSFER FLUID

TMC LC-25 is a heat transfer fluid and a replacement for PG25 used in data centers.

## PRODUCT INFORMATION

TMC LC-25 heat transfer fluid is an inhibited propylene glycol water-based fluid blend with a low pH. It is specifically designed for liquid cooling in data centers due to its balance of thermal performance and safety. It provides freeze-point suppression and protection against corrosion, bacterial growth, and hard scaling.

## APPLICATIONS

TMC LC-25 is designed for liquid cooling in data centers and IT infrastructure for direct, DTC, and closed-loop systems. It can be used as an alternative to all types of PG25 used for DLC cooling of data centers. It is a versatile, inhibited heat transfer fluid. This fluid contains an advanced alkalinity additive to extend working life, reduce maintenance costs, and enhance protection of capital assets.

## COMPOSITION

- Product Form: Mixture
- CAS No.: 57-55-6
- Synonyms: 1,2-Propanediol (25% aqueous solution), PG 25% Solution, 25% Propylene Glycol/Water Mixture, PG-W25, Monopropylene glycol (25% aqueous solution)

## FEATURES

- Replacement for all PG25 used in data centers
- Meets all known DLC and CDU process cooling specifications
- ASTM D 1384-05 corrosion tested
- OAT (organic acid technology) inhibitors
- Does not contain phosphates, nitrates, primary/secondary amines, borates, silicates, or 2-ethyl hexanoic acid (2-EHA)

## PACKAGING

TMC LC-25 is available in the following sizes and weights:

- **Pail** — 40 lb / 18 kg / 4.6 gal / 17.6 L
- **Drum** — 441 lb / 200 kg / 51.7 gal / 195.8 L
- **Sample** — 2.2 lb / 1 kg
- **Tote** — 2,205 lb / 1,000 kg / 258.7 gal / 979.4 L
- **Tanker** — 44,000 lb / 19,958 kg / 5,163.9 gal / 1,9547.5 L

## SHELF LIFE & STORAGE

- Hydroscopic. Keep container tightly closed. Keep away from heat and direct sunlight. Store in a well-ventilated place.
- Information on Mixed Storage: Strong acids. Strong Bases.
- Storage Temperature: 0–40 °C
- Packaging Materials: IBC — Composite with plastic inner receptacle — for liquids, with rigid plastic inner receptacle.



## PHYSICAL PROPERTIES

PROPERTY	UNITS	TMC LC-25
<b>Appearance</b>	—	Clear Liquid
<b>pH Range</b>	—	7.5–9.0
<b>Refractive Index</b>	—	1.3628–1.3641
<b>Density</b>	g/mL	1.0210–1.0222
<b>Boiling Point @ 760 mmHg</b>	°C	≈104
<b>Freezing Point</b>	°C	-10.6
<b>Dynamic Viscosity</b>	mPa·s	2.73
<b>Kinematic Viscosity</b>	cSt	2.67
<b>Reserve Alkalinity</b>	mL 0.1N HCl/10 mL	> 3
<b>Electrical Conductivity</b>	µmho/cm	950–1100
<b>Thermal Conductivity @ 50°C/122°F</b>	W/m·K	0.510
<b>Specific Heat Capacity @ 50°C/122°F</b>	J/kg·K	3,947
<b>Chlorides (Cl<sup>-</sup>)</b>	ppm	< 2
<b>Foam Volume after 5 min. aeration</b>	mL	< 10
<b>Foam Brake Time</b>	s	2

Not for specification purposes. All values @ 20°C unless otherwise specified.

## MATERIALS COMPATIBILITY

TMC LC-25 has been tested and passes the ASTM D1384-05 test standard. It offers excellent corrosion protection and is designed for use in installations containing copper and aluminum.

METAL	SPECIFICATION (mg)	TMC LC-25 (mg)	CORROSION RATE (mpy)
<b>Copper</b>	< 10	2.1	0.09
<b>Solder</b>	< 30	5.0	0.19
<b>Brass</b>	< 10	1.9	0.08
<b>Steel</b>	< 10	-0.6	-0.03
<b>Iron</b>	< 10	-1.7	-0.08
<b>Aluminum</b>	< 30	-3.0	-0.36

Negative values indicate weight gain.

# TMC LC-25 Continued

**Safety and Handling:** Before using this product, please thoroughly read the current product SDS and label, following all applicable safety precautions described therein (e.g., recommended storage and safe handling, appropriate exposure controls and personal protective equipment (PPE), addressing accidental spills, disposal considerations, etc.).

**Safety Data Sheet:** Consult Safety Data Sheet before use.

**Regulatory:** For regulatory information about this product, contact your TMC representative.

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