

ThermaGraph vs. DowFrost LC25

A graphene nanofluid in water — no glycol — for indoor CDU, D2C, and rear-door loops. Not a freeze fluid. Not a dielectric. Not a top-off into LC25.

- WATER LOOP
- 0.05–0.20 WT%
- NO GLYCOL
- MADE IN USA

More heat from a water loop you already pump. Same copper, same pumps, new fill. If the loop currently holds inhibited PG (DowFrost LC25), drain it first. HTC is the meeting number: +6% to +18% versus a glycol baseline in internal pumped-loop tests — not flake k, not a field PUE.

ARCHITECTURE	LOADING	THE INCUMBENT	THE PROOF
Indoor TCS / DECS	0.05–0.20 wt %	DowFrost LC25	30-day named loop
CDU secondary, direct-to-chip, rear-door. Conditioned halls only.	Graphene in deionized water. Low on purpose — sludge is not a feature.	Specified PG25. k = 0.485 W/m·K at 50 °C (Dow published). That is the job.	Baseline. Fill. 7 / 14 / 30. Coupons. Filters. You keep the data.

THERMAGRAPH · VS. DOWFROST LC25

PROPERTY	ThermaGraph	DowFrost LC25
Job	Indoor CDU / D2C / rear-door water loop. Graphene nanofluid.	Specified PG25 for technology cooling loops
Carrier	Deionized water. No glycol. No freeze package.	25% inhibited propylene glycol
Freeze	0 °C. Indoor / conditioned TCS only.	PG25 freeze protection to –10 °C (Dow)
Heat transfer	+6% to +18% HTC vs glycol baseline (internal loop tests).	Baseline in the same geometry
Thermal k	Versus LC25 on the signed lab sheet. Water’s k is already above LC25; graphene is additional.	0.485 W/m·K at 50 °C (Dow published)
Loading	0.05–0.20 wt% graphene (COA).	—
Materials	Coupons with every pilot. Not a substitute for LC25 inhibitors until coupons return.	Specified inhibitor package for copper
Electrical	Conductive (aqueous). Not a dielectric. Do not immerse live boards.	Conductive glycol loop fluid
Best application	Indoor closed copper loops where freeze is not specified.	Loops that require PG25 freeze protection

WHAT WE MEASURED

Hot-metal, pumped-loop, and passive-convection tests on the carrier we actually ship. k, viscosity, method, and temperature stay on the signed TDS / lab sheet. Patent pending. Made in the USA.

THE ASK

Request a 30-day indoor-loop sample. If the loop holds LC25, drain first. Baseline ΔT, pump power, k, viscosity, particle count; fill; 7 / 14 / 30; coupons and filter inspection. You keep the data. ROI after we price the dose against your kWh.

Internal tests and models unless marked. Dow LC25 k is Dow published data. Not a specification until the signed lab sheet. Two SKUs — do not mix with ThermaGraph-D.