

TMC-115 HEAT TRANSFER FLUID

TMC-115 is environmentally friendly and highly efficient. It is used as a coolant in single-phase immersion scenarios.

PRODUCT INFORMATION

TMC-115 is a colorless, odorless, safe, and non-flammable fluid that is insoluble in water, with good thermal ability, high insulation and stability, high density, low surface tension, low viscosity, high latent heat of evaporation, excellent material compatibility, no flash point, and a wide operating temperature range. This makes it an ideal heat transfer fluid for ion implanters, among other applications.

APPLICATIONS

- Temperature regulation of electrostatic chucks in dry etching equipment
- Heat transfer medium for heat pipes and heat pumps
- Thermal control of light source units in lithography systems
- Heat-transfer fluid for ion implanters
- Data center cooling

FEATURES

- Zero Ozone Depletion Potential (ODP)
- Low Global Warming Potential (GWP)
- Good insulation performance
- No damage to electronic precision equipment, electronic components, or circuits
- Through distillation regeneration, the amount of industrial waste is greatly reduced, and the effect of rapid drying can be achieved

MATERIALS COMPATIBILITY

TMC-115 offers excellent material compatibility.

PACKAGING

TMC-115 is available in the following sizes and weights:

- **Jug** — 11 lb / 5 kg / 0.7 gal / 2.75 L
- **Pail** — 44 lb / 20 kg / 2.9 gal / 11 L
- **Drum** — 551 lb / 250 kg / 36.3 gal / 137.4 L
- **Sample** — 2.2 lb / 1 kg / 0.2 gal / 0.6 L

SHELF LIFE & STORAGE

Shelf life is 5 years from the date of manufacture when stored in the original packaging materials and stored under normal conditions. TMC will re-certify material every 5 years up to 20 years.



PHYSICAL & ENVIRONMENTAL PROPERTIES

PROPERTY	UNITS	TMC-115
Form	—	Liquid
Color	—	Colorless
Odor	—	Odorless
Molecular Mass	g/mol	450
Liquid Density @ 25°C	kg/m ³	1,815
Boiling Point	°C	110–115
Freeze Point	°C	-109.7
Flash Point	—	None
Ignition Point	—	None
Critical Temperature	°C	284.7
Critical Pressure	MPa	5.03
Vapor Pressure @ 25°C	kPa	2.426
Latent Heat of Vaporization	J/g	92
Thermal Conductivity	W/(M·K)	0.069
Specific Heat @ 25°C	J/kg-K	1,144
Kinematic Viscosity @ 25°C	cSt	1,353,000
Refractive Index	—	1.275
Dielectric Strength @ 2.5 mm	kV	39.4
Dielectric Constant @ 1 MHz	—	1.7803
Surface Tension	dynes/cm	15
Coefficient of Volume Expansion @ 25°C	—	0.0014
Dielectric Loss @ 1 MHz	—	0.00046
Volume Resistivity	Ohm-cm	2.484 × 10 ¹⁶
Ozone Depletion Potential (ODP)	—	0
Global Warming Potential (GWP)	—	120

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

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.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that TMC believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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