

TMC-43 ELECTRONIC LIQUID

TMC-43 Electronic Liquid is a colorless, transparent perfluorinated liquid.

PRODUCT INFORMATION

TMC-43 has a unique chemical structure, providing thermal and chemical stability, material compatibility, non-flammability, and non-toxicity in practical applications. The combination of these excellent properties makes it an ideal fluid medium for various applications. Additionally, TMC-43 has a wide temperature range in liquid form, making it highly suitable as a heat transfer medium and test fluid to meet various challenging requirements.

APPLICATIONS

- Immersion Cooling
- Secondary Loop Cooling
- Quality and Reliability Testing
- Environmental Stress Testing/Thermal Shock Testing
- Leak Testing
- Chemical Process Medium

FEATURES

- Zero Ozone Depletion Potential (ODP)
- Non-Flammable
- High Boiling Point
- No Flash Point
- Low Photochemical Reactivity

MATERIALS COMPATIBILITY

TMC-43 is compatible with various metals, plastics, and elastomers. However, soft materials and elastomers containing extractable plasticizers and fluorinated polymers should be tested prior to use.

TMC-43 is not compatible with finely divided active metals, or alkali and alkaline earth metals

PACKAGING

TMC-43 is available in the following sizes and weights:

- **Jug** — 11 lb / 5 kg / 0.7 gal / 2.8 L
- **Pail** — 44 lb / 20 kg / 3 gal / 11.2 L
- **Drum** — 550 lb / 250 kg / 36.9 gal / 139.7 L
- **Sample** — 2.2 lb / 1 kg / 0.1 gal / 0.6 L
- **Tote** — Available Upon Request

PHYSICAL & ENVIRONMENTAL PROPERTIES COMPARISON

PROPERTY	UNITS	3M™ FC-43	TMC-43	TMC-43E
Type	—	Legacy	Replacement	Equivalent
Form	—	Liquid	Liquid	Liquid
Color	—	Colorless	Colorless	Colorless
Odor	—	Odorless	Odorless	Odorless
Boiling Point	°C	174	174	160
Freeze/Pour Point	°C	-50	-50	-65
Average Molecular Weight	g/mol	670	670	N/A
Vapor Pressure	kPa	0.14	0.19	0.20
Liquid Density	kg/m ³	1860	1860	1790
Kinematic Viscosity	cSt	2.5	2.5	1.012
Specific Heat	J/kg-K	1100	1.1	1320
Coefficient of Thermal Expansion	1/°C	0.0012	0.0012	0.0018
Liquid Thermal Conductivity	W/m-K	0.065	0.065	0.52
Surface Tension	mN/m	16	16	16
Dielectric Strength	kV	>40	>40	52.57
Dielectric Constant	@ 1kHz	1.9	1.9	5.6
Volume Resistivity	Ohm-cm	3.4 x 10 ¹⁵	3.4 x 10 ¹⁵	5.0 x 10 ⁹
Ozone Depletion Potential (ODP)	—	0.0	0.0	0.0
Global Warming Potential (GWP)	—	>5000	>5000	1
Flash Point	—	None	None	None
Refractive Index	—	1.29	1.29	1.29

Not for specification purposes. All values @ 25°C unless otherwise specified.

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.

DISPOSAL & RECYCLING

This fluid can be recycled and reused. Help protect the environment and don't pay for expensive disposal services.

TMC Industries can reclaim your used fluorinated fluids, restoring them to like-new condition, and save you up to 50% in replacement fluids while protecting the environment.

TMC Reclaimed Fluids are tested to meet new product specifications. It will be clear and odorless, and a Certificate of Analysis is issued with every order.

TMC Industries offers a **100% satisfaction guarantee** on all our reclaimed fluids. We back this up with a no-questions-asked refund policy. To learn more, [click here](#).

EXTERNAL DOCUMENTS

- [TMC Used Fluid Reclamation Service Brochure](#)

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.

Product Use: Many factors beyond TMC's control and uniquely within user's control can affect the use and performance of a TMC product in a particular application. Given the variety of factors that can affect the use and performance of a TMC product, user is solely responsible for evaluating the TMC product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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