



GLOBAL LEADER PROVIDING
PERFORMANCE FLUIDS & LUBRICANTS

TECHNICAL DATA SHEET

TMC-7300E ENGINEERED FLUID

TMC-7300E is a direct drop-in replacement for 3M™ Novec™ 7300 Fluid. Third-party laboratory testing has confirmed that it has no detectable PFAS.

PRODUCT INFORMATION

TMC-7300E Engineered Fluid is a direct drop-in replacement for 3M™ Novec 7300, offering exact chemistry and physical properties. TMC-7300E is a clear, colorless, odorless fluid that has utility in a wide variety of applications, including heat transfer, lubricant deposition, electronic testing, and cleaning applications.

This product is non-flammable, thermally stable, non-ozone depleting, and has a very low global warming potential. It does not contribute to the formation of photochemical smog. It is recommended for use as a replacement for perfluoropolyethers (PFPEs), perfluorocarbons (PFCs), hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs).

This product has an excellent safety profile and is backed by third-party testing that confirms that it contains no detectable PFAS. It is the ideal replacement for ozone-depleting substances. With its wide range of applications and non-flammable nature, it offers the perfect balance of performance and protection.

APPLICATIONS

TMC-7300E offers high performance in heat transfer applications for wafer fabrication equipment and for direct contact cooling with military-grade electronics.

- Heat Transfer
- Lubricant Deposition
- Electronic Testing
- Cleaning Applications

FEATURES

- Zero Ozone Depletion Potential (ODP)
- Low Global Warming Potential (GWP)
- Non-Flammable
- Low Toxicity

MATERIALS COMPATIBILITY

TMC-7300E fluid is compatible with most metals and hard polymers. Soft and elastomeric materials should be limited to compounds that contain the least amount of extractable plasticizer.

Compatible Materials

METALS

Aluminum
Copper
Monel
Nickel
Stainless Steel

PLASTICS

Acrylic (PMMA)
Polyethylene
Polypropylene
Polycarbonate
ABS

ELASTOMERS

EPDM
Natural Rubber
Polyurethane



PHYSICAL & ENVIRONMENTAL PROPERTIES COMPARISON

PROPERTY	UNITS	3M™ NOVEC™ 7300	TMC-7300E
Type	—	Legacy	Replacement
Form	—	Liquid	Liquid
Color	—	Colorless	Colorless
Odor	—	Odorless	Odorless
Boiling Point	°C	98	100
Freeze/Pour Point	°C	-38	-36
Average Molecular Weight	g/mol	350	350
Vapor Pressure	kPa	6	6
Latent Heat of Vaporization	J/g	102	102
Liquid Density	kg/m ³	1660	1670
Kinematic Viscosity	cSt	0.71	0.71
Specific Heat	J/kg-K	1140	1140
Coefficient of Thermal Expansion	1/°C	0.0013	0.0013
Thermal Conductivity	W/m-K	—	0.063
Solubility of Solvent in Water	ppmw	67	67
Dielectric Strength	kV	>25	>25
Ozone Depletion Potential (ODP)	—	0.0	0.0
Global Warming Potential (GWP)	—	200	200

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

TMC-7300E Continued

PACKAGING

TMC-7300E is available in the following sizes and weights:

- **1 Gallon Jug** — 12 lb / 5.4 kg
- **5 Gallon Pail** — 44 lb / 20 kg
- **55 Gallon Drum** — 550 lb / 250 kg
- **Sample** — 2.2 lb / 1 kg
- **275 Gallon Tote** — Available Upon Request

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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