



GLOBAL LEADER PROVIDING
PERFORMANCE FLUIDS & LUBRICANTS

TECHNICAL DATA SHEET

TMC-705 DIFFUSION PUMP FLUID

TMC-705 diffusion pump fluid is a single-component (pentaphenyl trimethyl trisiloxane) clear fluid that is chemically equivalent to Dow Corning® DC-705.

PRODUCT INFORMATION

TMC-705 is a methylphenyl silicone fluid with superior resistance to oxidation, heat, and chemicals. TMC-705 is used in vacuum pump applications and enables prolonged and stable operation.

APPLICATIONS

- High-vacuum oil diffusion pump applications

FEATURES

- Superior oxidation, heat, and chemical resistance
- Does not crack under heat or when exposed to intake gas, unlike petroleum and fatty acid ester pump oils
- Does not emit oxidation gas
- Does not produce acid, tar, pitch, or other substances when the vacuum is broken during heating
- Enables prolonged and stable operation of vacuum pumps

MATERIALS COMPATIBILITY

TMC-705 is compatible with most materials. Contact TMC for more information.

PACKAGING

TMC-705 is available in the following sizes and weights:

- **1 Gallon Jug** — 8.5 lb / 3.8 kg
- **5 Gallon Pail** — 44 lb / 20 kg
- **55 Gallon Drum** — 440 lb / 200 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.



PHYSICAL & ENVIRONMENTAL PROPERTIES

PROPERTY	UNITS	TMC-705
Form	—	Liquid
Color	—	Colorless
Odor	—	Odorless
Boiling Point	°C	243
Viscosity	cSt	160
Specific Gravity	g/mL	1.097
Molecular Weight	g/mol	546
Refractive Index	—	1.575
Surface Tension	mN/m	34.3
Volume Resistivity	TΩ•m	0.1 min.

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

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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