



# FluoSolv® 72DE

3M Novec 72DE Replacement Fluid

## Technical Information

### *Azeotropic Vapor-Degreasing Solvent*

#### Introduction

**FluoSolv® 72DE** is a high-performance azeotropic solvent blend composed of methyl nonafluorobutyl ether, ethyl nonafluorobutyl ether, and trans-1,2-dichloroethylene (t-DCE). Engineered to match 3M™ Novec™ 72DE, it delivers consistent composition and efficacy throughout vapor-degreasing and immersion cycles. Ideal for cleaning oils, greases, waxes, coatings, and lubricant deposition, FluoSolv® 72DE offers exceptional solvency, low surface tension, and excellent material compatibility, making it fit for heavy-duty precision cleaning needs. Importantly, it offers zero ozone depletion potential and a lower global warming potential than most alternatives.

#### Key Features & Benefits

- **Balanced azeotropic blend** ensures stability under evaporation conditions.
- **Exceptional solvency & low surface tension** (19 dynes/cm), ensuring deep penetration and efficient cleaning.
- **Zero Ozone Depletion Potential (ODP = 0) and low Global Warming Potential (43)**—an eco-responsible cleaning agent.
- **Non-flammable and low toxicity**, with a generous safety margin per industrial hygiene monitoring.

#### Applications

FluoSolv® 72DE is optimally suited for:

- **Vapor degreasing and immersion cleaning** of medium- to heavy-duty residues (e.g., oils, greases, waxes).
- **Lubricant or coating deposition** where a robust solvent is required.
- **Replacement for ozone-depleting and high-GWP chlorinated solvents**, enabling safer and more compliant processes.

#### Material Compatibility

**Metals:** Aluminum, stainless steel, carbon steel, brass, Molybdenum, Tantalum, Tungsten, titanium, Copper–Beryllium alloys (C172), Magnesium alloys (AZ31B).

Special note: Copper can oxidize under certain conditions, though no structural degradation is reported.

**Plastics:** epoxy resin, polyethylene, polypropylene, polyester, nylon, PTFE (Teflon).

Caution: Acrylic (PMMA) can experience stress crazing under exposure, particularly in ASTM F484 stress-crazing testing.

**Elastomers:** butyl rubber (best for long-term use), natural rubber, Buna-S, EPDM, polysulphide, chlorosulfonated polyethylene.

Caution: Silicone rubber and some fluoropolymers (including FKM/FFKM) may swell after prolonged contact.

## Physical Properties

Property	NuGenTec FluoSolv® 72DE	HCFC 141b	HCFC-225
Boiling Point °C	43	32	54
Liquid Density (g/mL)	1.28	1.23	1.55
Surface Tension (dynes/cm)	19	19.3	16.2
Solubility of Solvent in Water (ppmw)	Negligible	210	330
Vapor Pressure at 25°C (mmHg)	~350	569	290
Global Warming Potential (GWP)	43	700	180/160
Ozone Depleting Chemical	0	0.10	0.03
Volatile Organic Compounds (VOC)	896g/L	Exempt	-
Flash point	None	None	None

### Free Solvent Sample and Vapor Degreaser for Testing

NuGenTec offers a small loaner vapor degreaser and a loaner 5-gallon pail to assist with your testing. The loaner vapor degreaser plugs into a standard wall outlet and fits on a standard pallet. This allows you to test our FluoSolv® solvent in your own controlled environment without immediately changing the solvent in your current equipment.

FluoSolv® 72DE is available for purchase in three package sizes:

- 55-gal phenolic lined metal drums
- 5-gal phenolic lined pails
- 1-gal HDPE plastic bottles

For further information about FluoSolv® 72DE for testing or purchasing please contact:

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