



FluoSolv® 71IPA

3M Novec 71IPA Replacement Fluid

Technical Information

Azeotropic Vapor-Degreasing Solvent

Introduction

FluoSolv® 71IPA is a high-performance azeotropic blend comprised of methoxy-nonafluorobutane ($C_4F_9OCH_3$) and isopropanol (IPA). It's engineered to match 3M™ Novec™ 71IPA in composition and behavior, providing superior cleaning of light oils, grease, fingerprints, and particulates. Featuring constant vapor-liquid composition, it maintains consistent performance throughout boiling cycles. It is non-flammable, non-conductive, possesses a low toxicity profile, and offers environmental advantages including zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Key Features & Benefits

- **Azeotropic blend** ensures stable composition during vapor cleaning.
- **Superior solvency** for polar soils, thanks to IPA component.
- **Low surface tension (~14.5 dynes/cm)** enables effective penetration into tight features.
- **Zero ozone depletion (ODP = 0)** and **reduced GWP (~310)**—an eco-aware alternative to older chlorinated solvents.
- **Non-flammable, low toxicity**, with an **8-hr TWA exposure limit of 750 ppm** for the HFE component and **400 ppm for IPA**.

Applications

FluoSolv® 71IPA is optimally suited for:

- **Precision cleaning**, rinsing, and drying of electronic, optical, and metal components.
- **Light-duty degreasing** of oils, greases, waxes, and fingerprints.
- Effective **"no-clean flux" residue removal** when combined with co-solvents.

Material Compatibility

Metals: Aluminum, Copper, carbon steel, stainless steel (302), brass, Molybdenum, Tantalum, Tungsten, Cu-Be alloy C172, Magnesium alloy AZ32B.

Plastics: acrylic (PMMA), phenolic, polyethylene, polypropylene, polycarbonate, polyester, epoxy, PET, ABS.

Elastomers: butyl rubber (best for >1 month exposure), natural rubber, nitrile, EPDM.

Exceptions: PTFE and silicone rubber can swell over prolonged exposure. Copper may oxidize when heat-aged.

Physical Properties

Property	NuGenTec FluoSolv® 71IPA	HCFC 141b	HCFC-225
Boiling Point °C	54.8	32	54
Liquid Density (g/mL)	1.48	1.23	1.55
Surface Tension (dynes/cm)	14.5	19.3	16.2
Solubility of Solvent in Water	<10%	210	330
Vapor Pressure at 25°C (mmHg)	207	569	290
Global Warming Potential (GWP)	310	700	180/160
Ozone Depleting Chemical	0	0.10	0.03
Volatile Organic Compounds (VOC)	67 g/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® 71IPA 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® 71IPA for testing or purchasing please contact:

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