



# FluoSolv® PF-5052

3M Novec PF-5052 Replacement Fluid

## Technical Information

### *Performance Fluid PF-5052*

#### Introduction

FluoSolv® Performance Fluid PF-5052 is a clear, colorless, fully-fluorinated fluid optimized for medium-temperature heat transfer and precision solvent applications. Engineered to meet or exceed the performance of the 3M™ original, it offers exceptional thermal and chemical stability, non-flammability, and low toxicity.

#### Material Compatibility

FluoSolv® PF-5052 is compatible with most metals, plastics, and elastomers, facilitating safe use across a broad range of equipment materials.

#### Applications

- Heat Transfer Media in cooling systems operating in moderate temperature ranges
- Solvent Deposition or Removal of fluorinated lubricants and oils - ideal for electronics or delicate cleaning scenarios

#### Key Features & Benefits

- **Chemically and thermally stable** - Maintains consistent fluid performance even under high-temperature or long-duration use.
- **Practically non-toxic** - Demonstrates very low acute and sub-chronic toxicity, making it safe for handling when proper protocols are followed.
- **Nonflammable** - Offers a significant safety advantage in applications requiring low fire risk.
- **Wide liquid temperature range** - Boiling point at approximately 50 °C and pour point as low as -80 °C support versatile operating conditions.
- **Excellent compatibility** - Works well with most metals, plastics, and elastomers, easing integration into existing systems.
- **Effective solvent properties** - Especially useful for depositing or removing fluorinated oils and lubricants.
- **Non-conductive** - Safe for use in electrical and electronic cooling applications.

## Physical Properties

Property	NuGenTec FluoSolv® PF-5052	HCFC 141b	HCFC-225
Boiling Point °C	50	32	54
Liquid Density (g/mL)	1.70	1.23	1.55
Surface Tension (mN/m)	13	19.3	16.2
Solubility of Solvent in Water	14ppmw	210	330
Vapor Pressure at 25°C (kPa)	36.4	569	290
Global Warming Potential (GWP)	High	700	180/160
Ozone Depleting Chemical	0	0.10	0.03
Volatile Organic Compounds (VOC)	Exempt	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® PF-5052 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® PF-5052 for testing or purchasing please contact:  
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