



FluoSolv[®] 71D90

3M Novec 71D90 Replacement Fluid

Technical Information

High-Performance Engineered Fluid

Introduction

FluoSolv[®] 71D90 is an azeotrope-like blend of 90% trans-1,2-dichloroethylene (t-DCE) and 10% hydrofluoroether, formulated as a precise replacement for 3M™ Novec™ 71D90. This engineered fluid offers exceptional solvency for aerosol cleaning applications and is highly effective in removing stubborn soils. However, it is not recommended for vapor degreasing or cold cleaning baths, as evaporation can alter blend composition, potentially introducing flammability risks.

Key Features & Benefits

- Outstanding solvency - ideal for formulating high-performance aerosol cleaners.
- Non-flammable (no closed-cup flash point) under typical conditions.
- Environmental excellence: Zero ozone depletion (ODP = 0) and extremely low global warming potential (GWP ≈ 32).
- Balanced exposure guidance: t-DCE component - 200 ppm (8-hour TWA); Novec 7100 component - 750 ppm.
- EPA SNAP-approved - all components listed as “acceptable” alternatives under the U.S. EPA’s SNAP program.

Applications

- Formulation of aerosol cleaners intended for precision cleaning tasks - particularly where HCFC-141b is being displaced.
- Not suitable for vapor or immersion cleaning systems due to evolving blend composition upon evaporation.

Material Compatibility

Metals: Aluminum, Copper, Stainless Steel, Titanium, Tungsten

Elastomers: Neoprene, Butyl Rubber, EPDM, Kynar (PVDF)

Plastics: HDPE, PTFE, Nylon, PVC, Epoxy, Phenolic

Physical Properties

Property	NuGenTec FluoSolv® 71D90	HCFC 141b	HCFC-225
Boiling Point °C	42.6	32	54
Liquid Density (g/mL)	1.26	1.23	1.55
Surface Tension (dynes/cm)	21.1	19.3	16.2
Solubility of Solvent in Water	<10%	210	330
Vapor Pressure at 25°C (mmHg)	405	569	290
Global Warming Potential (GWP)	32	700	180/160
Ozone Depleting Chemical	0	0.10	0.03
Volatile Organic Compounds (VOC)	1134 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® 71D90 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® 71D90 for testing or purchasing please contact:

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