



# FluoSolv<sup>®</sup> NC-786

## Technical Information

### **Non-Chlorinated Vapor Degreasing Fluid**

#### **Introduction**

FluoSolv<sup>®</sup> NC-786 is an azeotropic blend of a proprietary fluorinated fluid mixture, cyclopentane and isopropyl alcohol. It is intended for precision degreasing applications for removal of particulates, fingerprints and light oils. A key attribute of this azeotropic blend is that it does not contain any chlorinated solvents making it desirable in applications and certain geographic locations where use of 1, 2 trans-dichloroethylene is not permissible.

FluoSolv<sup>®</sup> NC-786 is a drop-in replacement for AK-225, Vertrel<sup>®</sup> MCA and other solvents that are used for precision vapor-degreasing, defluxing, particulate removal and cleaning fingerprints.

FluoSolv<sup>®</sup> NC-786 has an ideal balance of solvency & physical properties such as high density, low surface tension and low viscosity to clean metal surfaces in the shortest amount of time.

#### **User Benefits**

NuGenTec FluoSolv<sup>®</sup> NC-786 is ideally balanced to deliver performance, worker safety and desirable environmental properties.

- Non-ozone depleting chemical (ODC)
- Drop-in replacement for AK-225
- Low global warming potential (GWP)
- Low toxicity; high allowable exposure limit (AEL);
- Non-chlorinated & high chemical stability

#### **Material Compatibility**

FluoSolv<sup>®</sup> NC-786 is compatible with all metals, ceramic and other non-conducting materials. Most elastomeric materials are compatible except fluoroelastomers such as Viton & Kalrez which tend to swell. It is recommended that all materials be tested prior to use.

Vertrel is a registered trademark of the DuPont company

## Material Compatibility

	Compatible	Additional Testing Required
<b>Metals</b>	Aluminum, Copper, S/S Titanium, Brass, Tungsten	-
<b>Elastomers</b>	Neoprene, Butyl Rubber, EPDM, Kynar (PVDF)	Viton A & B, Kalrez**
<b>Plastics</b>	HDPE, PTFE, Nylon, PVC Epoxy, Phenolic	Stressed plastic* (Acrylic, ABS)

\*\* Viton & Kalrez are fluoroelastomers that tend to swell when exposed to fluorinated fluids; dimensional changes are reversible

\* Acrylics & ABS in stressed conditions are more susceptible to solvent attack at elevated temperatures.

## Physical Properties

Property	NuGenTec FluoSolv® NC-786	Asahi AK-225	DuPont Vertrel® MCA	Honeywell Solstice®
Boiling Point °C [°F]	49 [120]	54 [129]	39 [102]	19 [66]
Density at 25°C (77°F) kg/liter [lb/gal]	1.149 [9.589]	1.55 [12.9]	1.41 [11.7]	1.27 [10.6]
Surface Tension at 25°C (77°F) dyne/cm	18.5	16.2	21.2	12.7
Viscosity at 25°C (77°F), cPs	0.40	0.59	0.59	0.53
Vapor Pressure at 25°C (77°F) kPa	72	38.5	62	152
Heat of Vaporization @bp cal/g	47.5	35	67.3	45.6
Global Warming Potential	150	370	806	1
Ozone Depleting Chemical	No	Yes	No	No
Volatile Organic Compounds (VOC) g/l	287	0	536	0
Allowable Exposure Limit (AEL) ppm	800	100	200	800
Worker Exposure Ceiling (ppm)	No	No	400 <sup>a</sup>	No
KB Value	45	31	50	25

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a: Has a ceiling of 400 ppm due to its acute toxicity. None of the above solvents have any stipulated ceiling on AEL



## Worker Safety

Data from acute toxicity studies of various ingredients has demonstrated that FluoSolv® NC-786 blend has low toxicity. It has a calculated AEL (Acceptable Exposure Limit) of 800 ppm based on its individual components. None of the ingredients in FluoSolv® NC-786 have any chronic or acute toxicity associated with them which makes it a worker friendly solvent.

*Please refer to the SDS for information on detailed exposure limits and toxicity-related data.*

NuGenTec FluoSolv® NC-786 does not have a flash-point is not classified as a flammable liquid per established definitions by NFPA or DOT, however being volatile, vapors may become flammable in air. The mixture exhibits a lower & upper flammability limit of 4.2% & 18.8% in air.

## Storage

FluoSolv® NC-786 is thermally & chemically a very stable solvent. It is non-reactive, has low water solubility and will not oxidize or degrade when exposed to air. It is not affected by any sunlight or other sources of UV radiation. Common industrial practice should be implemented for storage; keep away from human food source and extreme temperature conditions. Freezing temperatures will cause the drums to compress and hot conditions will balloon the drum. The product in any case is perfectly usable.

## Solvent Recycling

FluoSolv® NC-786 is a stable azeotropic blend easy to reclaim and reuse by a simple distillation process. Commercially available modular recycling units can easily be added to realize sizable savings in solvent usage. Solvent recovery yields are typically in the range of 80 to 95%.

Please contact the FluoSolv® Technical Services group for information.

## Product Specifications

### FluoSolv® NC-786 Composition (Typical)

Fluorinated Fluid Mixture	> 85 wt%
Cyclopentane	Proprietary
IPA	Proprietary
Water	< 100 ppm
Non-volatile residue	<100 ppm (drums) <200 ppm (pails)
Appearance	Clear, colorless

## Packaging & Availability

FluoSolv® NC-786 is available in three package sizes

- 55-gal lined metal drums (net wt. 55)
- 5-gal lined pails (net wt. 55 lb.)
- 1 gal amber glass bottles (net wt. 11 lb.)

*Note: Drum & Pail have phenolic liner*

All package sizes are inventoried at Medina, OH. Lead times are 1-3 business days after receipt of order.

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For further information about FluoSolv® NC-786 and purchasing please contact office listed below closest to you.

### **FluoSolv Technical Services**

**Product & Technology Development**  
**1155 Park Ave**  
**Emeryville, CA 94608**

Toll Free (US only): 888-996-8436  
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