

EnSolv® NEXT

NON FLAMMABLE HIGH TRANS FLUORINATED SOLVENT BLEND FOR PRECISION CLEANING

FEATURES AND BENEFITS

- HIGH SOLVENCY POWER (91 KB)
- LOW BOILING POINT (104° F)
 - LOW SURFACE RESIDUE
 - LOW SURFACE TENSION
 - LOW VISCOSITY
- NON FLAMMABLE
 - NO FLASH POINT

CONTAMINANTS REMOVED

- ADHESIVES
- BUFFING COMPOUNDS
 - REFRIGERANT OILS
 - GREASES
- HYDRAULIC OILS
 - SILICONE OILS
 - WAXES
- DRAWING OILS
- AND MANY OTHERS...

ENVIRONMENTAL PROPERTIES

- ZERO OZONE DEPLETION POTENTIAL
- LOW GLOBAL WARMING POTENTIAL
 - REDUCED CARBON FOOTPRINT



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TECHNICAL DATA SHEET

INTRODUCTION

EnSolv® NEXT Precision Fluorinated Cleaning Solvent is an azeotrope-like solvent blend consisting of 1,2-trans-dichloroethylene, HFC-365mfc (1,1,1,3,3-pentafluorobutane) and a proprietary fluorinated solvent. It has an ozone depletion potential (ODP) of zero and a very low global warming potential (GWP), making it a very environmentally conscious alternative to solvents such as HCFC-225 (AK-225), n-propyl bromide and perfluorocarbons in numerous applications.

This Technical Data Sheet details EnSolv® NEXT's physical and chemical properties, environmental profile, health and safety information and typical usage applications. For further information, please consult the Safety Data Sheet (SDS).

APPLICATIONS

This solvent blend is perfectly suited for vapor degreasing in existing equipment, cold cleaning applications, refrigerant flush applications and many others. Its solvency for hydrocarbon soils is superior to most similar high-trans fluorinated solvent blends. With a high KB value of 91, it can reliably replace even very effective cleaning solvents such as n-propyl bromide (nPB) and trichloroethylene (TCE). It can also be used as a carrier fluid for deposition of materials such as silicone and other lubricants.

Vapor degreasing is the most economical and efficient means of using EnSolv® NEXT. Modern vapor degreasing equipment is very effective at preventing solvent emissions and keeping workplace exposures low. EnSolv® NEXT has broad spectrum cleaning capability for many types of contaminants including cutting oils, heavy greases, stamping oils, gear oils, hydraulic oils, vacuum oils, mineral oils, waxes and refrigerant oils.

ENVIRONMENTAL PROPERTIES

All of the components of EnSolv® NEXT are listed "acceptable" by the U.S. EPA under the SNAP program as a substitute for ozone depleting substances. The ODP of EnSolv® NEXT is zero and its GWP is exceptionally low.

All ingredients are also TSCA listed, not included in the SARA Title II Section 313 list of toxic chemicals, and therefore not subject to SARA Title III (EPCRA) reporting regulations. EnSolv® NEXT is not a Hazardous Air Pollutant (HAP) and not regulated under NESHAP.

HEALTH AND SAFETY

This solvent has a large margin of error for safety, due to the low toxicity of its constituent ingredients. Inhalation toxicity is low and it is a mild skin and eye irritant. Published AEL and TLV figures, based on 8-hour time weighted average (TWA) exposures, suggest no adverse effects at up to 200 ppm. Refer to the SDS for a detailed description of these figures for the individual chemical components of EnSolv® NEXT.

MATERIALS COMPATIBILITY

EnSolv® NEXT is compatible with most polymers and elastomers typically encountered with cleaning of precision parts, electronics, etc. However, acrylic, ABS and polycarbonate parts may be affected by cracking or crazing, and should be tested under typical cleaning conditions for compatibility. Butyl rubber, Buna-S and neoprene are compatible elastomers with EnSolv® NEXT.

The solvent is also compatible with copper, stainless steel, aluminum, iron and every other metal commonly used in precision parts manufacturing.

EnSolv[®] NEXT

AN EFFECTIVE ALTERNATIVE TO N-PROPYL BROMIDE AND HCFC-225

PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------|--|
| APPEARANCE..... | CLEAR & BRIGHT |
| ODOR..... | SLIGHT |
| FLASH POINT..... | NONE (ASTM D 93) |
| WATER SOLUBILITY..... | 0.06% @ 68°F |
| SPECIFIC GRAVITY..... | 1.245 @ 77°F |
| BOILING POINT..... | 40.0°C/ 104°F |
| VISCOSITY..... | 0.60 cPs |
| REFRACTIVE INDEX..... | 1.4105 @ 68°F |
| VAPOR PRESSURE..... | 200 mm Hg @ 32°F 471 mm Hg @ 77°F 1107 mm Hg @ 122°F |
| VOC Content..... | 8.156 lbs/gal |

FLAMMABILITY

EnSolv[®] NEXT exhibits no flash point on either Pensky-Martens Closed Cup (ASTM D93) or Tag Closed Cup (ASTM D56) methods. However, as is true with almost all halogenated solvents, it does have flammable limits in air with a LEL of 4.3 and a UEL of 13.5 (% by volume in air) in the presence of a high ignition energy source (e.g. a welding torch). EnSolv[®] NEXT is not classified as flammable or hazardous for transport by NFPA or DOT.

SOLVENT RECOVERY

This product is readily recoverable by distillation equipment such as a vapor degreaser or still. Because EnSolv[®] NEXT has azeotrope-like properties, the percentages of the different compounds within it will stay within tolerance ranges through regular use and distillation. The presence of contaminants may alter the characteristics of the solvent during recovery. Solvent recovery processes should be monitored to ensure the most efficient recovery possible.

STORAGE AND HANDLING

EnSolv[®] NEXT is very chemically and thermally stable, and will not oxidize or degrade during storage under normal conditions. It is recommended to store the product in a clean, dry area and out of direct sunlight or other heat sources. Do not freeze or store below 32°F (0°C) nor above 100°F (38°C) to prevent leakage or potential rupture of container due to contraction/expansion and pressure changes. Drum pumps are recommended to dispense the solvent from its container. Refer to the Safety Data Sheet for more information, or contact Enviro Tech for further assistance.

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MATERIAL COMPATIBILITY

This product is compatible with all metals and most plastics and elastomers. Testing should always be done on parts to be cleaned in a particular process prior to implementing EnSolv[®] NEXT into the process.

COMPATIBLE MATERIALS

| | |
|-------------------------------|---------------|
| Polyvinylchloride (PVC, CPVC) | Polypropylene |
| Polyester (PET, BET) | Polyethylene |
| Polyimide (PI, PEI, PAI) | Acetal |
| Polyetherketone (PEK) | Epoxy |
| Polyaryletherketone (PEEK) | PTFE, Teflon |
| Polyarylsulfone (PAS) | Phenolic |
| Polyphenylene Sulfide (PPS) | Ionomer |

INCOMPATIBLE MATERIALS

| | |
|---------------------------|-----------------|
| Polystyrene | Epichlorohydrin |
| Polyphenylene Oxide (PPO) | Silicone |
| Polycarbonate (ABS) | Natural Rubber |
| Polysulfone | Acrylic |
| EPDM | |

PACKING INFORMATION

PRODUCT IS AVAILABLE IN THE FOLLOWING CONTAINER SIZES AND WEIGHTS:

| | |
|---------------|------------|
| 5 GAL PAIL | 50 LBS |
| 55 GAL DRUM | 551 LBS |
| 330 GAL TOTES | 3,300 LBS |
| BULK TANKER | 44,000 LBS |

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