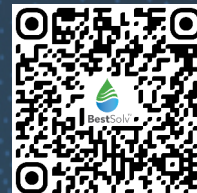




# BestSolv™ 7100

## Non-Flammable Engineered Solvent



### Technical Data Sheet

#### Introduction

BestSolv™ 7100, also known as methyl nonafluoroisobutyl ether (C<sub>4</sub>F<sub>9</sub>OCH<sub>3</sub>), is an exact molecule, single isomer replacement for 3M® Novec® 7100. The hydrofluoroether (HFE) solvent is VOC exempt and used in heat transfer, data center thermal cooling, semiconductor manufacturing, light cleaning or as a rinsing agent.

It is ideal for use in sensitive electronic environments due to its non-flammable and non-conductive / dielectric properties. Along with effective thermal heat transfer and solvent cleaning capabilities, it has low toxicity, a low global warming potential (GWP), and zero ozone depletion (ODP).

BestSolv™ 7100 is an effective cleaning agent, making it suitable for electronics, precision optics, and fingerprinting removal. With its high boiling point and low surface tension, it is well-suited for use in vapor degreasing applications as a pure substance, as an azeotropic component, or as a co-solvent for cleaning parts.

#### Features and Benefits

#### Applications

- Non-Conductive
- Non-Flammable
- Low Surface Tension
- Low Viscosity
- Zero ODP
- No/low Surface Residue
- High Dielectric Strength
- Good Thermal Stability
- VOC Exempt

- Thermal / Heat Transfer
- Immersion / Data Center Cooling
- Semiconductor Dry Etching, Wafer Testing, Packaging Testing
- Oxygen Cleaning Systems
- Biological Specimen Preservation
- Fingerprint Forensics

- Deposition Carrier Fluid
- Lubricant Carrier Fluid
  - Fluorocarbons
  - Hydrocarbons
  - Silicones
- Heavy Cleaning as Co/Bi-Solvent
  - Oils
  - Greases
  - Fluxes

- Medium Cleaning as Azeotrope with 1,2 trans
  - Oils
  - Greases
  - Waxes
- Light Cleaning / Rinse as Neat
  - Fluoropolymers
  - Particulate
  - Fluoro-lubricants

#### Industries Served

#### Physical and Chemical Properties

- Aerospace
- Military
- Electronic
- Semiconductor
- Optical
- Medical device

CAS #	163702-08-7
Molecular Weight	250 g/mol
Liquid Density	1.51 g/mL
Boil Point	59 °C / 138 °F
Freezing / Pour Point	-135 °C / -211 °F
Dielectric Strength 0.1" Gap	>26kV
Volume resistivity	10 <sup>10</sup> Ohm-mm

Vapor Pressure (25°C)	210 mmHg
Specific Heat	1.28 kJ/(kg-K)
Exposure TWA	750 ppm
Surface Tension	13.6 dyne/cm
Thermal Conductivity	0.07 W/m-K
GWP	<300
ODP	0

Data compiled from published information. Not for specification purposes



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# BestSolv™ 7100



## Storage and Handling

Based on Pensky-Martens Closed Cup (ASTM D93) or Tag Closed Cup (ASTM D56) methods, BestSolv™ 7100 exhibits no flash point and is not classified as flammable by OSHA or DOT. As with almost all halogenated solvents, flammability limits exist in the presence of a high ignition energy source.

BestSolv™ 7100 is best stored inside a clean, dry area and out of direct sunlight or other heat sources. It is thermally stable and will not oxidize or degrade during storage under normal conditions. To prevent leakage or potential rupture of the container due to contraction / expansion and pressure changes, do not store below 32 °F (0 °C) or above 90 °F (32 °C)

## Environmental Properties

- SNAP EPA accepted substitute for ozone depleting substances
- VOC Exempt $\beta$
- Not subject to SARA Title III (EPCRA) reporting regulation
- Non hazardous air pollutant (HAP) / Not regulated under NESHAP
- Low global warming potential (GWP)
- Low / zero ozone depletion potential (ODP)

## Health and Safety

Reference the SDS for details on:

- Individual chemical components
- Disposal
- Transportation
- Regulatory requirements
- Other information

## Materials Compatibility

BestSolv™ 7100 is compatible with common metals, most alloys and some polymers / elastomers.

**Metals:** Aluminum, Brass, Copper\*, Steel, Stainless Steel

**Plastics:** ABS, Acrylics (PMMA), Epoxy, Polyethylene, Polypropylene, Polycarbonate, Polyester, PET, Phenolic

**Elastomers:** Buytl Rubber, EPDM, Natural Rubber, Nitrile Rubber

\*Heat aging resulted in slight surface oxidation of copper. Some swelling of PTFE and silicone rubber.

Initial compatibility testing on non-production parts is recommended. Material compatibility should always be performed via testing with specific contaminants under process-specific cleaning conditions.

## Product Use / Warranty

All information contained in this document is based on data believed to be reliable but the accuracy or completeness thereof is not guaranteed and are made without representation or warranty. Many factors can affect the use, performance, time and environmental conditions in a particular application. User is responsible for evaluation to determine whether it is fit for a particular purpose and application and products discussed are sold without warranty, expressed or implied, in law or fact.

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