



Precision-V 3710 Vapor-Degreaser Solvent Product# 3710

Product Description

Techspray® has formulated Precision-V 3710 to be a drop-in replacement for 3M Novec 7100.

Precision-V cleaners leave no residue and evaporate extremely fast, and are nonflammable with no flash-point. Electronics, optics, and metal parts are quickly and thoroughly cleaned, eliminating the need for further rinsing. Precision-V is non-ozone depleting, so ideal replacements for cleaners containing Freon, HFC-141b and AK225.

Precision-V 3710 has azeotrope properties that allow it to maintain stable properties as it is cycled in a vapor-degreaser. It is neither reactive nor corrosive to metals commonly found in the construction of vapor-degreasers.

Exposure to Precision-V solvents is less hazardous than many other solvents commonly used in vapor-degreasers: e.g. TCE (Trichloroethylene, CAS #79-01-6), nPB (n-Propyl Bromide, CAS #106-94-5), and Perc (Perchloroethylene, CAS #127-18-4).

NOTE: As with all vapor degreaser equipment and processes, observe all safety precautions, guidelines and operating rules associated with these units. Failure to do so may put operations personnel at risk. Avoid excessive vapor losses, loss of refrigeration, excessive boil sump heat, etc. Make sure all equipment is operated in accordance with the manufacturer's guidelines and instructions. If in doubt, contact your manufacturer immediately.

Features / Benefits

- Drop-in replacement for 3M Novec 7100
- Nonflammable
- Non-conductive
- Compatible with plastics
- Low toxicity
- Low global warming potential (GWP)
- Zero ozone depletion potential (ODP)
- VOC-exempt solvent (US EPA)
- Low surface tension for cleaning within tight areas

Applications

- Used in vapor-degreasers and general solvent cleaner
- Cleaning, Data Center Cooling
- Deposition Solvent
- Electronic Cooling
- Heat Transfer
- Immersion Cooling for Data Centers
- Oxygen System Cleaning
- Preservation for Biological Specimens



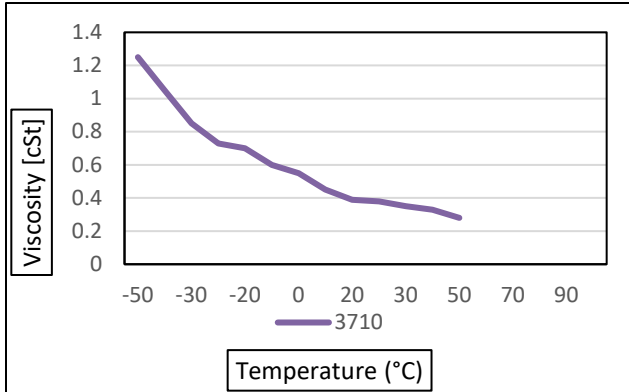
Typical Product Data and Physical Properties

Exposure Limit	>200 ppm
Physical State	Liquid
Odor	ethereal
Appearance	Clear, colorless liquid
Flash Point	none
Percent Volatile	100
Vapor Pressure	202 mmHg
Initial Boiling Point	142°F (61°C)
Freezing Point	-211°F (-135°C)
Density	94.266 lb./ft ³
Dielectric Strength	>25 kV
Dielectric Constant	7.4 (@1kHz)
Specific Heat/ Heat Capacity	1183 J/kg-K
Surface Tension	13.6 dynes/cm
GWP	297
VOC	exempt (EPA)
Heat of Vaporization	112 kJ/kg
Kinematic Viscosity	0.38 cSt
Kauri-butanol Value	10 Kb
Ozone Depletion Potential	0
Volume Resistivity	1x10 ⁸ Ohm-m
Absolute Viscosity	0.58 cps
OEL	750
Operational Range	-104°C to 50°C
Shelf life	5 years
Atmospheric Life	4.1 years
Liquid Thermal Conductivity	0.069 W/m-k
NVR (ND @ method limit) (ppm)	<3.0
Purity Elemental Analysis (ppm)	Na 0.9
	B 0.4
	Ca, K 0.1
	Ag, Al, As, Ba, Be, Bi, Cd,
	Co, Cr, Cu, Fe, Ga, Ge, Hf,
	Hg, In, Li, Mg, Mn, Mo, P,
	Pb, Rb, Re, S, Sb, Se, Si, Sn,
	Sr, Ta, Ti, Tl, V, W, Zn, Zr <0.1

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Thermophysical Properties:

Precision -V solvents Kinematic viscosity [cSt] Vs Temperature Curve (°C)



Reclamation Process

The reclamation (ie. boil down) process utilizes the vapor-degreaser as a still to distill solvent from the dirty boil sump and allows you to reclaim and reuse this solvent.

When it is determined that the Boil Sump needs to be cleaned out, you should do the following things to boil down the solvent:

1. If you have a 2 sump vapor-degreaser, drain the rinse sump into a clean container for reuse. If you have a one-sump vapor-degreaser, drain the spray reservoir using the spray wand. This material should be collected in a clean container, so it can be reused.
2. Allow the solvent to continue to boil, and the vapors to condense, until such time as one of two things happens:
 - a. the High Temperature Control (HTC) trips and turns off the heat to the heating elements or b. the Liquid Level Control trips because the level in the Boil Sump is too low.
3. Drain the remaining solvent/soil mixture into a container that is labeled as Hazardous Waste. This material can be used in future "boil downs" to reclaim more of the solvent in the mixture.
4. Use the retained solvent (from step 1) to refill the vapor-degreaser and add whatever volume of solvent is necessary to completely fill the machine.

This process can be repeated as often as necessary, depending on the amount of usage of the vapor-degreaser and the amount of soil that is introduced into the vapor-degreaser.

When you "boil down", always put the solvent/soil mixture into the vapor-degreaser to reclaim additional amount of the solvent from this mixture.

Compatibility

Precision-V cleaners are generally compatible within normal operating conditions of vapor degreaser and with exposed materials normally found with the equipment. Specific plastic and elastomeric formulations vary with manufacturers; therefore, we recommend compatibility verification when required.

Material	Compatibility
Plastics	Excellent
Acrylics	Excellent
ABS/Polycarbonate	Excellent
Nylon	Excellent
PTFE	Excellent
Epoxy	Excellent
PEEK	Excellent
Silicones	Good
Ceramics	Excellent
Metals	Excellent

Packaging and Availability

Precision-V Vapor-Degreaser Flux Remover available in the following sizes:

3710-G	1 gal (3.8L)
3710-5G	50 lbs. in 5 gal (18.9L)
3710-54G	580 lbs. in 54 gal (204L)

Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Resources

Techspray® products are supported by global sales, technical and customer services resources.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email tsales@techspray.com or visit our web site at: www.techspray.com.

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