



Precision-V Solvent 3820 Product #3820

Product Description

Ideal replacement for 3M Novec, Chemours Vertrel, and AK225-based solvents.

Precision-V 3820 is an ultrasonic and immersion cleaner with combination of highly effective parts cleaning, broad material compatibility, in a safe formulation.

Exposure to Precision-V solvents is less hazardous than other solvents commonly used in ultrasonic and immersion degreasing: e.g. TCE, nPB, and Perc. Precision-V 3820 has a lower boiling point than other solvents, reducing heat-stress on components being cleaned and reducing energy consumption from the boil sump and chiller coils.

Precision-V 3820 cleans R, RA, RMA and SA type flux residues after high temperature reflow, wave and hand-soldering, with either lead or lead-free solder. It is also powerful enough for cutting fluids, heavy greases & oils.

NOTE: Reformulated replacement for Precision-V Parts Cleaner (part #1654), Flux Remover (1655), and VC-1600 (1656).

Features/Benefits

- Powerful cleaner – effective on fluxes, cutting fluids, heavy greases & oils
- Nonflammable
- Rapid evaporation
- Zero residue
- Safe on most plastics
- Low VOC
- Non-ozone depleting
- Low Boiling Point – Lower Heat-Stress, Lower Energy

Applications

- Ultrasonic & immersion cleaning
- Removes flux residues electronic or electrical soldering
- Effective on both rosin and no-clean fluxes
- Effective for lead and lead-free soldering processes
- Removes light oils



Typical Product Data and Physical Properties

Physical state	Clear, colorless liquid
Odor	Faint ethereal odor
Percent volatile	100
Vapor pressure	269.23 mmHg@20°C
Vapor density	>1 [Air=1]
Boiling point	102°F (39°C)
Flashpoint and method	None to boiling point
Solubility in water	Negligible
Density	1.35 g/mL at 25°C
VOC	
EPA	43%
CARB	100%
SCAQMD	1342 (g/l)
RoHS / REACH Compliant	yes
Shelf life	5 years

Precision-V 3820 is the drop-in replacement for Precision-V solvent part #1654 and 1655. The following is comparative data:

Specification	3820	1654	1655
Boiling point	102°F (39°C)	94°F (34°C)	90°F (32°C)
Vapor pressure (mHg@20°C)	132.28	159.10	129.34
Density (g/cc)	1.328	1.34	1.308
GWP (CO ₂ = 1)	374	802	777
VOC			
EPA (%)	43	43	43
CARB (%)	100	100	100
SCAQMD (g/l)	1354	1349	1358

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Material Compatibility - Plastic

ABS:	Not compatible
Nylon:	Excellent
Lexan:	Not compatible
HDPE:	Excellent
LDPE:	Excellent
C.E. Phenolic:	Excellent
PMMA:	Not compatible
POM:	Excellent
PP:	Excellent
PS:	Not compatible
PTFE:	Excellent
PVC:	Not compatible

Material Compatibility - Elastomers

5 minute immersion at room temperature

Silicone	Slight Swelling ²
Santoprene	Excellent ¹
Hypalon	Excellent ¹
Epichlorohydrin	Slight Swelling ²
Viton	Slight Swelling ²
EPDM	Excellent ¹
Neoprene	Excellent ¹
Butyl rubber	Excellent ¹
Polyurethane	Slight Swelling ³
Nat. gum rubber	Slight Swelling ²
Buna-N	Slight Swelling ²
Oil Resist Vinyl	Excellent ¹
Buna-S	Slight Swelling ²
Sorbothane	Excellent ¹
Kelrez 6375	Excellent ¹
Kelrez 7075	Excellent ¹

1 = Swelling under 5%

2 = Swelling under 10%, recovery to under 5%

3 = Swelling under 12%, recovery to under 5%

Metals Compatibility – Metals

Brass foil:	Excellent short-term, slight reaction long-term
Copper foil:	Excellent short-term, slight reaction long-term
Nickel 200	Excellent short-term, slight reaction long-term
Aluminum 6061	Excellent
Aluminum 2024	Excellent short-term, slight reaction long-term
Stainless Steel 316	Excellent
Stainless Steel 304	Excellent
Mild carbon steel	Slight reaction short

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Packaging and Availability

3820-G	0.9 gallon (3.4L)
3820-5G	4.5 gallons (17.1L)
3820-54G	49.6 gallons (187.8L)

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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