



Product Information

PRECISION V

BENCHTOP CLEANERS

1650, 1651



Introduction



Techspray has engineered solvent cleaners that offer exciting new options for precision cleaning. Precision-V cleaners are powerful, leave no residue, evaporate extremely fast, and are non-flammable 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.

Maintenance Cleaner removes oils, greases, silicones and other common industrial contaminants. Ideal as a general degreaser or contact cleaner.

Flux Remover clean R, RA, RMA and SA type flux residues after high temperature reflow, wave and hand-soldering. Ideal for lead and lead-free processes.

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 #000127-18-4).

Features / Benefits

- Non-Flammable
- Low VOC
- Non-Ozone Depleting
- Residue-Free
- Rapid Evaporation
- Safe on Most Plastics
- Much Safer Than nPB and TCE
- RoHS Compliant
- REACH Compliant

Applications

Maintenance Cleaner

- Removes oils, greases, silicones and other common industrial contaminants
- Contact cleaner

Flux Remover

- Removes flux residues electronic or electrical soldering
- Effective on both rosin and no-clean fluxes
- Effective for lead and lead-free soldering processes

Techspray Solvent Lines

PRECISION-V

High Performance, High Precision

- Non-Flammable
- VOC – 37% (EPA), 75% (CARB)
- Plastic Safety – Better*
- Evaporation – Best
- Non-Ozone Depleting
- Residue-Free

G3

Powerful and Non-Flammable

- Non-Flammable
- VOC – 60% (EPA), 75% (CARB)
- Plastic Safety – Good*
- Evaporation – Best
- Non-Ozone Depleting
- Residue-Free

ECOLINE

Powerful and Economical

- Flammable
- VOC – 75% (EPA), 75% (CARB)
- Plastic Safety – Best*
- Evaporation – Better
- Non-Ozone Depleting
- Residue-Free

* There are literally hundreds of types and grades of plastics and elastomers (rubber). Always test on inconspicuous area before using any new solvent.

Chemical Components

Component	CAS#
1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-4310mee)	138495-42-8
1,2-transdichloroethylene	156-60-5
Ethanol	64-17-5
Cyclopentane.....	287-92-3
1,1,1,2-Tetrafluoroethane (aerosol only)	811-97-2
Carbon dioxide (aerosol only).....	124-28-9

Chemical Properties (MSDS available on request)

- EXPOSURE LIMIT: 420 ppm (weighted average of aerosol)
- PHYSICAL STATE: Liquid
- ODOR: Faint ethereal odor
- APPEARANCE: Clear, Colorless liquid
- PERCENT VOLATILE: 100
- VAPOR PRESSURE: 101.88 mmHg@20C (VOC Composite Vapor Pressure)
- VAPOR DENSITY: > 1 (Air=1)
- BOILING POINT: 33°C (91.4°F) – initial boiling point
- FLASHPOINT AND METHOD: None to boiling point --- Pensky Marten Closed Cup
- DENSITY: 1.2815 at 25°C
- VOC: 36.74% by weight (EPA)
75% by weight (CARB)

Exposure Limit Comparison

CLEANER	Toxicity (wt ave of TLV)
Precision-V Maintenance Cleaner & Flux Remover	420 ppm
AK225 (1663)	270 ppm
AK225 ATE (1658)	243 ppm
AK225 T (1669)	281 ppm
AK225 ATMS (1664)	323 ppm
n-Propyl Bromide (nPB)	10 ppm
Trichloroethylene (TCE)	50 ppm
Perchloroethylene (Perc)	25 ppm
DuPont Vertrel SMT	200 ppm
3M Novec 72DA	200-300 ppm

Compatibility

Plastics

Material	Compatibility
ABS	Not Compatible
Nylon	Excellent
Lexan	Not Compatible
HDPE	Excellent
LDPE	Excellent
C. E. Phenolic	Excellent

Material	Compatibility
PMMA	Not Compatible
POM	Excellent
PP	Excellent
PS	Not Compatible
PTFE	Excellent
PVC	Not Compatible

Elastomers

1 hour immersion at room temperature, 1 hour recovery period. Initial swelling may be higher.

Material	Compatibility
Silicone	Excellent (1)
Santoprene	Incompatible (6)
Hypalon	Slight Swelling (3)
Epichlorohydrin	Slight Swelling (2)
Viton	Slight Swelling (3)
EPDM	Excellent (1)
Neoprene	Excellent (1)
Butyl rubber	Slight Swelling (3)

Material	Compatibility
Polyurethane	Moderate Swelling (5)
Nat. gum rubber	Slight Swelling (3)
Buna-N	Moderate Swelling (4)
Oil Resist Vinyl	Incompatible (6)
Buna-S	Slight Swelling (3)
Sorbothane	Moderate Swelling (5)
Kelrez 6375	Excellent
Kelrez 7075	Excellent

- 1 = Initial swelling, but recovery under 5%
- 2 = Swelling under 10%
- 3 = Swelling under 20%
- 4 = Swelling under 30%
- 5 = Swelling under 40%
- 6 = Shrinkage 10-20%

Please note that this is an extreme test. 1 hour immersion is not typical for cold cleaning but a worst case scenario. Always test first on inconspicuous area or scrap part before using any new solvent. Swelling under 20% should not impact the integrity of a seal, but swelling over 20% or shrinkage of 10% or more would be a concern.

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.

Packaging and Availability

Precision-V Maintenance Cleaner available in the following sizes:

1650-16S	16 oz aerosol
1650-P	1 pint (.47L) in glass bottle
1650-G	1 gal (3.8L) in glass bottle
1650-5G	50 lbs in 5 gal (18.9L) metal drum

Precision-V Flux Remover available in the following sizes:

1651-16S	16 oz aerosol
1651-P	1 pint (.47L) in glass bottle
1651-G	1 gal (3.8L) in glass bottle
1651-5G	50 lbs in 5 gal (18.9L) metal drum

Resources

Techspray® products are supported by a 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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Call to locate a distributor
in your country.

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