

# MicroCare precision cleaners lead the industry in reliability, safety and cost-effectiveness

MicroCare is a leader in the high-performance world of cleaning, coating and lubricating. For metal finishing, optics, electronics, aerospace, medical devices and related industries, MicroCare offers three different technologies. The Vertrel® specialty solvents from DuPont™ offer exceptional versatility as solvents, drying agents and carrier fluids. The Bromothane™ cleaners from Chemtura replace most chlorinated solvents while proprietary formulations from MicroCare add unique capabilities. All three classes of products offer exceptional performance and value.



## Vertrel® Solvents, Only from DuPont™

Vertrel® specialty fluids were developed by DuPont to provide safe, effective and environmentally acceptable alternatives to old-style, ozone-depleting solvents. Based on nonflammable HFC chemistries, the unique physical properties of the Vertrel fluids make these materials ideal replacements for CFC-113, HCFC-225, HCFC-141b, nPB, TCE, most aqueous-based cleaning products and many hydrocarbon choices. The most popular Vertrel choices include:

### Vertrel® MCA Degreaser

This is a powerful precision degreaser for difficult soils. It is often used to flush high-purity oxygen systems, such as in hospitals and military vehicles, because it removes combustible residues without adding any additional risks of flammability. It also offers excellent results on Krytox-like greases, oils and insoluble particulate.

M2S-MCAP	50 lb. (22.6 kg) Pails	5 gal. (19 L)
M2S-MCAD	550 lb. (248.9 kg) Drums	55 gal. (200 L)

### Vertrel® SMT Defluxer

This is a powerful defluxer and the best-selling Vertrel cleaner. It delivers excellent solvency on both ionic (inorganic) and organic soils found on circuit boards today. This high density, low surface tension cleaner easily goes under tight-fitting components for exceptional cleaning results.

M2S-SMTP	50 lb. (22.6 kg) Pails	5 gal. (19 L)
M2S-SMTD	550 lb. (248.9 kg) Drums	55 gal. (200 L)

### Vertrel® SFR Defluxer

This is the newest Vertrel electronics cleaner, featuring a new HFC formulation with reduced global warming impact. This industrial-strength defluxer is the best

choice for the high-temperature fluxes and pastes found on lead-free electronics. It delivers excellent solvency for both ionics and organics. Users prefer this product when dealing with stubborn contamination or tight spacings, and durable materials of construction.

M2S-SFRP	45 lb. (20.3 kg) Pails	5 gal. (19 L)
M2S-SFRD	500 lb. (226 kg) Drums	55 gal. (200 L)

### Vertrel® SDG Degreaser

Also using new HFC technology from DuPont, this is the best degreaser for the toughest cleaning applications. It is a drop-in replacement for the ozone-depleting HCFC-225, and also can replace chlorinated and brominated solvents. It is most commonly used in metal cleaning.

M2S-SDGP	45 lb. (20.3 kg) Pails	5 gal. (19 L)
M2S-SDGD	500 lb. (226 kg) Drums	55 gal. (200 L)

### Vertrel® XF Carrier Fluid

The mildest Vertrel solvent is Vertrel XF. This clear, plastic-safe liquid is ideally suited for use in vapor degreasers, hand-wiping applications such as flat-panel televisions, plus more typical flushing and rinsing applications. Since the cleaner has very low solvency (it lifts contamination rather than dissolves it) it is widely used during the pre-cleaning of disks and head stack assemblies and then used as a carrier to coat those disks with silicone. It also is often used to deposit PTFE lubricants.

M2S-XFP	60 lb. (29.9 kg) Pails	5 gal. (19 L)
M2S-XFD	660 lb. (298 kg) Drums	55 gal. (200 L)

### Vertrel® XP Particulate Rinse

Vertrel XP is a mild, affordable rinsing fluid and ultra-mild precision cleaner targeted on removing fine particulate from metal and nonmetal parts. With more ability

to dissipate static bonds than XF, it can remove contaminants such as dust particles, skin flakes, fibers and other process contaminants. It also can dissolve light layers of oils.

M2S-XPP	55 lb. (24.9 kg) Pails	5 gal. (19 L)
M2S-XPD	600 lb. (272.2 kg) Drums	55 gal. (200 L)

## Vertrel® Drying Agents

Solvent drying, or dewatering, uses the fundamental traits of the solvent — high density, low surface tension and immiscible in water — to instantly remove water from precision parts without expensive blowers, heaters or labor. “Displacement drying” lifts the water off the parts because the solvent is heavier than water and doesn’t mix with it. “Absorption drying” absorbs the water into the solvent, where it is removed in subsequent reprocessing. Absorption drying is preferred when the quantity of water to be removed is small.

### Vertrel® XDA

Vertrel XDA is the mildest of the dewatering agents, for plastic parts or optical components with delicate coatings.

M2S-XDAP	60 lb. (27.1 kg) Pails	5 gal. (19 L)
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### Vertrel® XDF

This is the agent of choice for metal parts and heavily contaminated applications.

M2S-XDFP	60 lb. (27.1 kg) Pails	5 gal. (19 L)
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### Vertrel® XP10

Vertrel XP10 uses “absorption drying” to remove water and simultaneously provide a gentle final cleaning.

M2S-XP10P	55 lb. (24.9 kg) Pails	5 gal. (19 L)
M2S-XP10D	600 lb. (271 kg) Drums	55 gal. (200 L)

NOTE: The Vertrel family of solvents is quite large, with other packaging sizes, other cleaners, other lubricants and specialty products optimized for a wide array of applications. Contact MicroCare for more details on these other choices.