



# Opteon™ | Vertrel™

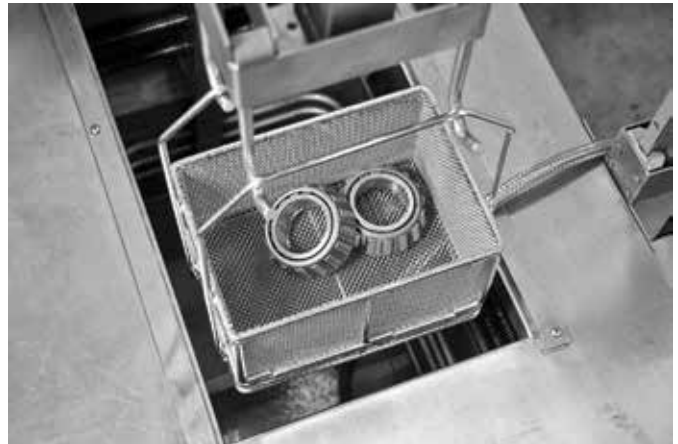
Specialty Fluids by The Chemours Company

## Cleaning Solvents for Precision Cleaning Applications— Perfectly Clean, Every Time

### Product Information

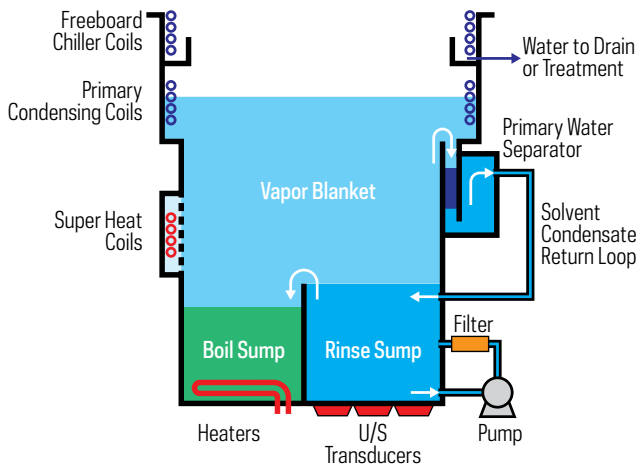
The specialty fluids by Chemours portfolio includes Opteon™ and Vertrel™ products. Vertrel™ products are HFC-based and Opteon™ products are HFO-based with zero ODP and low GWP. The portfolio provides a range of solvency power, boiling points, compatibility with a variety of materials, and high performance. Opteon™ and Vertrel™ specialty fluids offer customers a broad and versatile mix of product options that are better for your business performance and the environment.

Opteon™ and Vertrel™ specialty fluids deliver superior solvency power while remaining safe, stable and nonflammable for every cleaning challenge you face. From grease removal to particle removal to everything in between, there is an Opteon™ or Vertrel™ product capable of meeting your needs.



### Precision Cleaning Applications

Developed with both performance and the environment in mind, Opteon™ and Vertrel™ specialty fluids are used for a wide variety of cleaning applications, including vapor degreasing, light and heavy soil removal, particulate/ionic removal, oxygen systems cleaning, precision cleaning and defluxing. Opteon™ and Vertrel™ specialty fluids are versatile enough to work in almost any industrial cleaning application and are widely used in critical industries, such as defense, aerospace, automotive, electronics, optics and medical device manufacturing.



## Cost Benefit of Vapor Degreasing with Specialty Fluids by Chemours

Opteon™ and Vertrel™ specialty fluids are azeotropes, ideal for vapor degreasing processes. They provide superior solvency power while offering a cost benefit to customers. Productivity is increased and cost lowered due to reduced cycle times, ease of solvent recovery and lower energy consumption. Parts are cleaned thoroughly, dried quickly and exit the machine cool and spot-free.

## New Name, Same Trusted Global Supplier of Specialty Fluids

The Chemours Company, formerly DuPont, is a new company based on more than 200 years of industry leadership and innovation. From our DuPont roots came Freon™ in the 1930's. Always a step ahead of the ever-changing regulatory landscape, we brought you Vertrel™ in the early 2000's. Today, we bring you Opteon™—a line of zero ODP, low GWP specialty fluids products developed with HFO technology. Vertrel™ and Opteon™ products are ideal replacements for nPB and TCE in precision cleaning applications.

### Specialty Fluids by Chemours Portfolio at a Glance

Property	Units	Opteon™ SF79*	Vertrel™ SDG	Vertrel™ MCA	Vertrel™ SFR	Vertrel™ SMT
Boiling Point	°C	47	43	39	41	37
Flash Point (TCC and TOC)	°C	None	None	None	None	None
Kauri-Butanol Value	kb	103	95	25	101	38
Vapor Pressure	kPa	44.7	51.7	61.8	57.9	64.75
Liquid Density	g/cm <sup>3</sup>	1.29	1.29	1.41	1.28	1.37
Viscosity	cP	0.42	0.59	0.49	0.58	0.47
Surface Tension	Dyn/cm	21	21.2	15.2	19.9	15.5
Lower Flammability Limits (LEL)	% vol	7.25	7	None	7	7
Upper Flammability Limits (UEL)	% vol	15.25	14	None	15	15
Liquid Specific Heat	kJ/kg-°C	1.069	1.12	1.13	1.16	1.13
Heat of Vaporization	kJ/kg	280	283	181.2	285	207.1
Acceptable Exposure Limits (AEL)	ppm	201	193	200	187	192

\*Formerly Opteon™ Sion

**For more information on Opteon™ | Vertrel™, please visit [vertrel.com](http://vertrel.com) or call (800) 969-4758.**

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