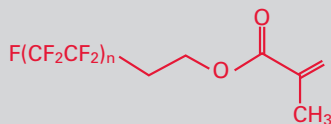


DuPont™ Zonyl® TM

1H,1H,2H,2H-PERFLUOROALKYLMETHACRYLATE ESTERS



DuPont™ Zonyl® TM is a mixture of homologous fluoroalkylmethacrylate esters useful for preparing a wide variety of specialty fluorinated products. It is part of a large family of fluorinated specialty monomers offered by DuPont. For information on other Zonyl® monomers, contact us or visit our website at www.zonyl.dupont.com.

Specifications

Property	Limit, wt%	Typical value, wt%
Perfluoroalkylethyl methacrylates	90.0 min.	95.0
Perfluoroalkylethyl alcohols	3.0 max.	2.0
Fluoropolymer	3.0 max.	2.0
Water	0.5 max.	0.07
Methyl methacrylate	1.0 max.	0.9
Cyclohexane	1.0 max.	0.5

Appearance: Zonyl® TM is a yellow to amber, semi-solid liquid containing waxy precipitate at room temperature.

Uses

Zonyl® TM is a versatile monomer used to provide coatings with low surface energy and excellent spill repellency, stain release, and soil resistance. Zonyl® TM serves markets in textiles, carpeting, paper, wood, and leather. In addition, Zonyl® TM-based products are used in cosmetics, surface treatments, UV curable coatings, fire fighting agents, and fiber optics where they impart low surface energy, increased chemical stability, and improved surface lubricity.

Zonyl® TM can easily undergo free radical-catalyzed homopolymerization and copolymerization with a wide variety of monomers including alkyl (meth)acrylates, vinylidene chloride, vinyl chloride, and styrenes. Zonyl® TM is soluble in common solvents for solution copolymerizations or can be easily dispersed in water with cationic, nonionic, or anionic surfactants for emulsion copolymerizations.

- **Binders for Pigments:** Zonyl® TM can be copolymerized to make a microencapsulated electrophotographic toner. (JP03130777)
- **Building Materials:** A composite sheet, suitable for use as a building construction textile such as roof lining and house wrap, is treated with a copolymer containing Zonyl® TM to provide a barrier to air and liquid water infiltration, while having high moisture vapor permeability and good thermal barrier properties. (US2006040091)
- **Nanoparticles:** Coating silicate and other nanoparticles with a hydrophobic or oleophobic coating containing Zonyl® TM provides exceptional surface modification for ceramics, wood, metal, stone, plastic, or concrete. (DE10051182)
- **Surface Grafting of Thermoplastics:** Open-cell foam sheets for humidifier membranes are modified with Zonyl® TM to become water- and oil-repellent. (JP3758693)
- **Copolymer Surface Treatments:** Many inventions continue to utilize the hydrophobic and oleophobic properties of Zonyl® TM to prepare emulsions and microemulsions for treating synthetic materials, natural products, and porous surfaces. (WO9422928, EP890592, WO2001040393, US5969063)



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Typical Physical Properties*

Property	Value
CAS Name	1H,1H,2H,2H-Perfluoroalkylmethacrylate esters
Other Name	Zonyl® TM
CAS Number	121940-19-0
Formula	Rf-CH ₂ CH ₂ OC(O)C(CH ₃)=CH ₂
Molecular weight	534
Form	Liquid, containing some solid
Color	Yellow to amber
Melting Point, °C (°F)	50–60 (122–140)
Solubility in Water, wt%	0
Solubility in Acetone, wt%	>50
Solubility in Methyl Ethyl Ketone, wt%	>50
Solubility in Trichloroethylene, wt%	>50
Solubility in Isobutyl Alcohol, wt%	10–50
Odor	Mild acrylic
Boiling Point, °C (°F)	210–350 (410–662)
Fluorine, %	60.4
Specific Gravity	1.6 at 40°C
Thickening Point, °C	25–40
Viscosity, °C (°F)	7 (55)
Flash Point, °C	>104

* This table gives typical properties (not specifications) based on historical production performance. DuPont does not make any express or implied warranty that this product will continue to have these typical properties.

Handling

DuPont™ Zonyl® TM, when freshly manufactured, is a yellow to amber liquid containing waxy precipitate at 25°C. It tends to solidify with cold storage. Warming to 55°C with mixing will restore the product to its original state.

Zonyl® TM is a skin and eye irritant. Care should be taken to avoid exposure by wearing appropriate gloves, safety glasses, and other protective equipment as needed. Refer to the MSDS for further handling information.

Packaging and Shipping Information

Zonyl® TM is not regulated by DOT, IMO or IATA. It is available in net 181.4 kg (400 lb) and 3.63 kg (8 lb) drums, and also in net 18 kg (40 lb) pails.

Contact Us

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K-16971 (05/07) Printed in the U.S.A.

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