

# DuPont™ Zonyl® PFBE

## 3,3,4,4,5,5,6,6,6-nonafluorohexA-1-ene



DuPont™ Zonyl® PFBE (perfluorobutylethylene) is a fluorinated olefin which is used as an additive, compounding agent or a co-monomer in free radical polymerizations. Zonyl® PFBE 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](http://www.zonyl.dupont.com).

### Specifications

Property	Limit, wt%
perfluorobutylethylene	96 min.
perfluorohexane	4 max.
perfluorohexylethylene	1 max.
perfluoroalkyl ethyl iodides	150 ppm max.

**Appearance:** clear, colorless liquid

### Uses

DuPont™ Zonyl® PFBE is a valuable fluorinated monomer used to impart low surface energy, chemical stability, and increased surface lubricity to finished products. Zonyl® PFBE can be used alone or as a co-monomer in free radical initiated polymerizations for both aqueous and non-aqueous systems. Zonyl® PFBE can also be compounded with plastics, where it can function as a mold release agent.

### Repellency and Lubricity

- Norbornane derivatives for repellency and antifouling treatments (JP2005272741)
- Antisoiling coatings for optical materials (JP2004245907)
- Fluoropolymer optical adhesive coating (US6703463)
- Water repellent composition (US5973055)
- Additives for lubricants (WO2000020539)

### Cleaning

- Defluxing of electronic cards (WO2005026310)
- Solvent for cleaning and drying surfaces (WO2004072218)
- Cleaning compositions (US6699829, US6689734, EP525266, US5250213)

### Solvent/Refrigerant

- Heat transfer and refrigerant component (US2006249706, US2006255312, US7029599)
- Coolants for use in fuel cells (WO2005008819, WO2005007771)
- Blowing agent for foams (DE4143148, EP520860, US5300534)
- Hair growth promoting component (DE102004001267)

### Fluorinated Silicones and Silanes

- Organofluorosilicon polymer for waterproofing (CN1405209)
- Fluorosilane precursor (JP2002205995, US6255516)
- Fluorinated silicone antifouling coating (US6265515)
- Polyfluoroalkyl siloxanes for electroviscous fluids (US5900190)
- Fluorosilane surface treatment agent (EP867441)
- Fluorosurfactants precursor (US5763552)
- Fluorinated silicones in cosmetics (JP09071505)



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## Typical Physical Properties\*

Property	Value
CAS Name	3,3,4,4,5,5,6,6,6-nonafluorohexa-1-ene
Other Name	Zonyl® PFBE
Formula	C <sub>4</sub> F <sub>9</sub> -CH=CH <sub>2</sub>
Molecular weight	246
Form	Liquid
Color	Clear
Odor	Ethereal
Boiling Point, °C (°F)	58 (136)
Fluorine, %	69.5
Specific Gravity	1.4 at 25°C
Thickening Point, °C	<25
Viscosity, cP (°C)	<7 (25)
Flash Point	Does not ignite

\* 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® PFBE 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® PFBE is not regulated by DOT, IMO or IATA. It is available in net 147.55 kg (325 lb) drums, and also in net 22.7 kg (50 lb) pails.

## Contact Us

For orders, samples, or technical inquiries, contact any of these locations world-wide:

### United States

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706-937-7552  
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Wilmington, DE 19899 USA  
Website [www.zonyl.dupont.com](http://www.zonyl.dupont.com)

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K-17024-1 (08/07) Printed in the U.S.A.

## DuPont Chemical Solutions Enterprise



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