

DuPont™ Capstone™ 42-U

3,3,4,4,5,5,6,6,6-NONAFLUOROHEXA-1-ENE



DuPont™ Capstone™ 42-U is a fluorinated olefin that is used as an additive, compounding agent or a co-monomer in free radical polymerizations. It is based on four fluorinated carbon molecules that cannot break down to PFOA in the environment. Capstone™ 42-U is part of a large family of fluorinated specialty monomers offered by DuPont. For information on other Capstone™ monomers, use the contact information below.

Specifications

Property	Limit
Perfluorobutylethylene	96 wt% min
Perfluorohexane	4 wt% max
Perfluorohexylethylene	1 wt% max
Perfluoroalkyl ethyl iodide	150 ppm max

Uses

Capstone™ 42-U is a valuable fluorinated monomer used to impart low surface energy, chemical stability, and increased surface lubricity to finished products. It can be used alone or as a co-monomer in free radical initiated polymerizations for both aqueous and nonaqueous systems. Capstone™ 42-U 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)

Typical Characteristics*

CAS Name	3,3,4,4,5,5,6,6,6-nonafluorohexa-1-ene
Other Name	Capstone® 42-U
Formula	$C_4F_9-CH=CH_2$
Molecular Weight	246
Form	Liquid
Color	Clear, colorless
Odor	Ethereal
Boiling Point, °C (°F)	58 (136)
Fluorine, wt%	69.5
Specific Gravity at 25°C	1.4
Thickening Point, °C	< 25
Viscosity, cP/°C	< 7/25
Flash Point	Does not ignite

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



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Handling

Capstone™ 42-U 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.

Packages and Shipping Information

Capstone™ 42-U 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

Phone 866-828-7009 (toll-free)
706-937-7552

Mail DuPont Chemical Solutions Enterprise
Customer Service Center, BMP 23
Wilmington, DE 19899 USA

Website www.capstone.dupont.com

Regional Offices

Contact the office nearest you.

Asia Pacific

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DuPont (Korea) In	82 2 2222 5309
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DuPont Asia Pacific (Hong Kong)	852 2 734 5345
DuPont Company (Singapore) Pte Ltd	65 6586 3626
DuPont Malaysia	603 5569 3006
DuPont Philippines	632 818 9911
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