

DuPont™ Capstone™ 62-I

PERFLUOROHEXYL ETHYL IODIDE



DuPont™ Capstone™ 62-I is a short-chain fluorinated ethyl iodide useful in producing high performance repellents and surfactants. It is based on six fluorinated carbon molecules that cannot break down to PFOA in the environment. Capstone™ 62-I is part of a large family of fluorinated specialty monomers offered by DuPont. For information on related products, use the contact information below.

Specifications

Property	Limit, wt%
Perfluorohexyl ethyl iodide	85.0 min
Perfluorobutyl ethyl iodide	5.0 max
Perfluorooctyl ethyl iodide	2.0–10.0
Perfluorodecyl ethyl iodide	6.0 max
Other perfluoroalkyl ethyl iodides	1.0 max

Uses

Capstone™ 62-I is a versatile short-chain fluorotelomer useful in producing high performance repellent and surfactant products. It provides a convenient means to introduce perfluoroalkyl functionality into products, providing lower surface energy, increased molecular orientation, improved chemical stability, and enhanced surface lubricity. Below is a partial list of applications for Capstone™ 62-I.

Liquid Crystals

- Fluoroalkylalkoxyphenols as liquid crystal additives (JP2004269480)
- Azo-type dichroic liquid crystal (JP10231437, JP3588813)
- Benzoates liquid crystal (JP09031027)
- Polyimides, polyamic acids, and poly(amide esters) for liquid crystals (US6380432)

Surfactants

- Fluorosurfactants for photosensitive materials (JP2004131493, JP2004130306)
- Phosphonic acids for surface treatments (US6824882)
- Polymerizable surfactants comprising them (JP10245370)
- Sulfate ester salts with high detergency and emulsifying properties (JP2003113155)

- Water-soluble fluorochemical surfactant-based foam stabilizers and film-formers for fire extinguishers (US5750043)
- Fluorosurfactants with high hydrophilicity (JP2004083412)
- Quaternary ammonium salt surfactants and dry-cleaning compositions (US5868799)
- Surfactants for dry-cleaning and fabric soil-proofing (US5610128)
- Amide surfactant (WO9003966)

Liquid, Soil, and Stain Repellents

- Urethanes for water- and oil-repellents (WO2006013791)
- Repellent polymer and surface treating agent (WO2005092937)
- Water and oil proof phosphate resin (JP2003096311)
- Water- and oil-repellent fluorine-modified silicones and their manufacture (JP09227685)
- Phosphonic acids useful as treatments for substrate surfaces (US6824882)
- Fluorosilicone resins (JP 3364355)
- Polyurethanes as soil-release agents (US3759874)

Biological and Pharmacological

- Chroman derivatives as antiestrogenic agents (US6552068)
- Phenylpiperidines for the treatment of pruritic dermatoses (US6610711)
- Steroids for antiestrogenic and antiuterotroph activity (US6780855)
- Aromatic compounds as x-ray and NMR contrast agents (WO9902193)
- Fluorinated amino acids as medical surfactants (FR2620445)
- Pesticidal malononitriles (JP2006298875)
- Sulfamides and sulfonimides for the treatment of diseases associated with metalloenzymes (WO2006067330)
- Cosmetics containing fluorinated silicones and volatile silicone oils (JP3589524)
- Perfluoroalkyl-containing metal complexes and their use in NMR diagnostics (US6916461)
- Enzyme immobilization and bioaffinity separations with perfluorocarbon polymer-based supports (US5079155)
- Fluorous-based microarrays (WO2006094194)
- Quaternary ammonium salts as antibacterial agents (CN1616410)
- Nitrile compounds used in pest control (WO2005063694)
- Reagents that facilitate the purification of glycosides and oligosaccharides (WO2003017930)
- Polysaccharides having fluoroalkyl groups for cosmetics (JP10130302)
- Amphiphilic compounds derived from peptides in drug delivery systems (US5650393)
- Amphiphilic fluorine derivatives for biomedical applications (US6359006)



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Optics, Electronics, and Printing

- Dispersion composition for electrophoretic displays (WO2004027506)
- Fluorinated silicon (IV) phthalocyanines and naphthalocyanines and their production for electrophoretic, magnetophoretic or electromagnetophoretic display (US2004030125)
- Polymers and photoresists for short wavelength imaging (US7132214)
- Resin composition for electrophotographic toner (JP2001075310)
- Phase change inks for acoustic printing (US6398857)
- Coatings for ink jet transparencies (US5897940)
- Fluorinated oxyvinyl polymers in optical fibers and waveguides (US6743943)
- Carboxylic ester lubricants for magnetic recording media (JP09104882)

Advanced Materials

- Heat-responsive gel compositions with high viscosity (JP2006241379)
- Imidazolium compounds as ionic liquid (WO2006051897)
- Fluorinated ligand-metal complexes for olefin polymerization (US6458985)
- Fluorinated photoinitiators and their application in UV curing of fluorinated monomers (US5274179)
- Mercaptan corrosion inhibitor composition and its application (JP2006283180)
- Phosphine catalysis (US6458978)
- UV-durable polymers as additives for synthetic resins (JP10212305)
- Phosphorus compounds as ligands for homogeneous catalysis in supercritical carbon dioxide (WO 9832533)
- Mold releases for polyurethanes and acrylic rubbers (JP58180597)
- Perfluoropolyether for lubrication and corrosion resistance (WO2003092914)

Typical Characteristics*

CAS Name	1-Iodo-1H,1H,2H,2H-perfluorooctane
Other Name	Perfluorohexyl ethyl iodide
CAS Number	2043-57-4
Formula	C ₈ H ₄ F ₁₃ I
Molecular Weight	474
Form	Liquid at room temperature
Color	Pale pink to reddish brown
Solubility in Water, wt%	Negligible
Solubility in Acetone, wt%	>50
Solubility in Methyl Ethyl Ketone, wt%	10-50
Solubility in Trichloroethylene, wt%	>50
Solubility in Isobutyl Alcohol, wt%	10-50
Odor	Slightly acidic
Boiling Point, °C (°F) at 760 torr	280 (410)
Fluorine, wt%	52
Specific Gravity at 50°C	1.8 g/cm ³
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.

Handling

Capstone™ 62-1 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™ 62-1 is not regulated by DOT, IMO or IATA. It is available in net 181.6 kg (400 lb) drums and 3.63 kg (8 lb) pails. Samples are also available.

Contact Us

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

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

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