Capstone™ Intermediate 62-I
Perfluorohexyl Ethyl Iodide
CF₃CF₂CF₂CF₂CF₂CF₂–CH₂CH₂—I

Technical Information

Description
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 and is part of a large family of fluorinated specialty monomers offered by Chemours. For information on related products, use the contact information below.

Specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Limit, wt%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfluorohexyl ethyl iodide</td>
<td>97 min.</td>
</tr>
<tr>
<td>Perfluorobutyl ethyl iodide</td>
<td>1.5 max.</td>
</tr>
<tr>
<td>Perfluoroctyl ethyl iodide +</td>
<td>0.1 max.</td>
</tr>
<tr>
<td>Perfluorodecyl ethyl iodide</td>
<td></td>
</tr>
</tbody>
</table>

Applications

Liquid Crystals
- Fluoroalkylalkoxyphenols as liquid crystal additives (JP2004269480)
- Azo-type dichroic liquid crystal (JP10231437, JP3588813)
- Benzoates liquid crystal (JP09031027)
- Polymides, 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 fluorne-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 anti-estrogenic agents (US6552068)
- Phenylpiperidines for the treatment of pruritic dermatoses (US6610711)
- Steroids for anti-estrogenic and anti-uterotroph activity (US6780855)
- Aromatic compounds as X-ray and NMR contrast agents (WO9902193)
- Fluorinated amino acids as medical surfactants (FR2620445)
- Pesticidal malononitriles (JP2006298875)
- Sulfamides and sulfinimides 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 (WO200609194)
- 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 (US650393)
- Amphiphilic fluoro derivatives for biomedical applications (US6359006)

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 (JP2000107310)
- 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 photo initiators 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 Physical Properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Name</td>
<td>1-iodo-1H,1H,2H,2H-perfluorooctane</td>
</tr>
<tr>
<td>Other Name</td>
<td>Perfluorohexyl ethyl iodide</td>
</tr>
<tr>
<td>CAS Number</td>
<td>2043-57-4</td>
</tr>
<tr>
<td>Formula</td>
<td>C8H4F13I</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>474</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid at room temperature</td>
</tr>
<tr>
<td>Color</td>
<td>Pale pink to reddish brown</td>
</tr>
<tr>
<td>Solubility in Water, wt%</td>
<td>Negligible</td>
</tr>
<tr>
<td>Solubility in Acetone, wt%</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Solubility in Methyl Ethyl Ketone, wt%</td>
<td>10–50</td>
</tr>
<tr>
<td>Solubility in Trichloroethylene, wt%</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Solubility in Isobutyl Alcohol, wt%</td>
<td>10–50</td>
</tr>
<tr>
<td>Odor</td>
<td>Slightly acidic</td>
</tr>
<tr>
<td>Boiling Point, °C at 760 torr</td>
<td>280 (410)</td>
</tr>
<tr>
<td>Fluorine, wt%</td>
<td>52</td>
</tr>
<tr>
<td>Specific Gravity at 50 °C (122 °F)</td>
<td>1.8 g/cm³</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Does not ignite</td>
</tr>
</tbody>
</table>

* This table gives typical properties based on historical production performance. Chemours does not make any express or implied warranty that this product will continue to have these typical properties.
**First Aid, Storage, and Handling**

Capstone™ 62-I 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. See the Safety Data Sheet (SDS) for specific product information. Like any other chemical product, fluorochemical intermediates must be handled and used with care. Normal care should be taken to avoid skin and eye contact. Before using this product, please read the current SDS and precautionary statement on the product package. Follow all applicable directions.

**Packages and Shipping Information**

Capstone™ 62-I 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.

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**Capstone™ Repellents and Surfactants**

- Deliver more sustainable solutions with maximum performance
- Are in compliance with REACH requirements
- Are listed on TSCA inventory

For questions regarding technical data, commercialization, and sampling:

**Chemours Fluoroproducts**

**Technical Inquiries**

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