

# DuPont™ Capstone™ 6-I

## PERFLUOROHEXYL IODIDE



DuPont™ Capstone™ 6-I is a perfluoroheptyl iodide useful for oil- and moisture-repellent coatings for paper and other surfaces. It is based on six fluorinated carbon molecules that cannot break down to PFOA in the environment. Capstone™ 6-I 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, wt%
Perfluoroheptyl iodide	95.0 min
Perfluorobutyl iodide	2.0 max
Perfluorooctyl iodide	2.0 max
Total inerts	3.0 max

### Uses

Capstone™ 6-I is a versatile monomer for products requiring low surface energy, chemical stability, and increased surface lubricity. It is an effective intermediate for the synthesis of esters, ethers, phosphates, ethoxylates, urethanes, and siloxanes. In addition to Capstone™ 6-I, DuPont offers related fluorotelomer products that differ slightly in composition and solubility. Below is a partial list of applications for Capstone™ 6-I.

- Liquid crystals derived from naphthalene esters (JP3830185), polyimides (JP08208836), azo-type dichroic dyes (JP07278551), or benzoate esters (JP06172266).
- Cosmetic additives including phosphate esters (US6747116, US5344930, US5004825), fluoropolyethers (JP2001048771), or fatty acid esters (JP07138145) for skin care.
- Surfactants, including phosphates (JP2003286290, WO9221688) and quaternary amines (JP2003238500), and advanced applications including supercritical CO<sub>2</sub> (WO2000035998).

- Medical applications including contrast agent formulations containing paramagnetic and diamagnetic perfluoroalkyl compounds for magnetic resonance tomography (US2006093554) and pharmaceutical agents in tumor therapy and interventional radiology (WO9730969).
- Lubricants for magnetic recording surfaces using perfluoropolyether lubricants (JP2006190393), partially fluorinated diesters (US6989356), and amine polyesters (JP2003277336).
- Fluorosiloxanes for antiglare and repellent films (JP3728752, US5621042), for antiblock and antifoaming agents (US5834613), as surface modifiers for resins and rubber (JP3598552), and for skin care and sunscreens (JP06234858).
- Fluorinated urethanes providing repellency and stain resistance for leather (JP2005336637), anti-block coatings for air bags (JP2002265863), and nonstick metal coatings (JP2628371).
- Fatty acid esters as waxes for skis (US5131674), fluorinated photoinitiators for polymerization (WO2003066693), ester-ureas as organic gellation agents (JP2006096821), resins for optics applications (US2005282996), and both internal and external mold release agents (JP20042772980, JP03091566).

### Typical Characteristics\*

CAS Name	1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-6-iodo-hexane
CAS Number	355-43-1
Formula	CF <sub>3</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> -I
Molecular Weight	446
Form	Heavy liquid
Color	Violet
Solubility in Water, wt%	0
Solubility in Acetone, wt%	>50
Solubility in Methyl Ethyl Ketone, wt%	10–50
Solubility in Trichloroethylene, wt%	10–50
Solubility in Isobutyl Alcohol, wt%	10–50
Odor	Slightly acidic, iodine
Boiling Point, °C (°F)	117 (243)
Freezing Point, °C (°F)	–45 (–49)
Fluorine, wt%	55
Specific Gravity	2.0
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™ 6-l is a skin, eye and respiratory irritant. Care should be taken to avoid breathing in vapor or mist and 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™ 6-l is not regulated by DOT, IMO or IATA. It is available in net 181.6 kg (400 lb) drums. Samples are also available.

## 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](http://www.capstone.dupont.com)

### Regional Offices

Contact the office nearest you.

#### Asia Pacific

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DuPont China Holding Co Ltd	0086-65058000-1010
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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K-20132 (07/08) Printed in the U.S.A.