



SOLARIS CHEM

SECTION 1

Identifiers and Synonyms

Product Name	Lumerium C60
Reference	SOL5060-LM
Chemical Name	Fullerene C ₆₀ (Buckminsterfullerene) [5,6]-Fullerene-C ₆₀
CAS Number	99685-96-8
Synonyms	Fullerene Carbon C60
Molecular Formula	C ₆₀
Molecular Weight	720.6 g/mol
Appearance	Dark brown to black solid powder

Product



SECTION 2

Optoelectronic Properties

Property	Value
HOMO	-6.1 eV
LUMO	-4.3 eV
Absorption λ_{max}	Not available (N/A)
Emission λ_{max}	Not available (N/A)

SECTION 3

Thermal and Physical Properties

Property	Value
Melting Point	> 280 °C (> 536 °F) - lit.
Color	Brown to dark grey
Texture	Powder
Solubility	Toluene, oils, o-DCB

SECTION 4

Storage & Handling

- Keep container tightly closed, in a cool place, protected from light.
- Keep under inert atmosphere; avoid prolonged air exposure.
- Use gloves and mask; prepare solutions in fume hood.
- Eye Irritation: Category 2 — causes serious eye irritation (H319)
- Respiratory Irritation: May cause respiratory tract irritation — STOT SE 3 (H335)
- Overall Toxicity: Animal studies show no significant acute toxicity; each derivative should be assessed

SECTION 5

Applications

- Electronics and Optoelectronics: Organic Photovoltaics (OPVs), Organic Light-Emitting Diodes (OLEDs), semiconductors.
- Energy Storage: Batteries & Supercapacitors, Fuel cells,
- Coatings and Materials Science: Lubricants, Antioxidant Coatings, Nanocomposites.
- Cosmetics and Personal Care: Anti-aging Skincare, UV Protection.
- Medicine and Biotechnology (research and pre-clinical): Drug Delivery, Neuroprotectio.
- Environmental Applications: Water Purification, Antimicrobial Coatings.

SECTION 6

Safety & Transport

- **Hazard Classification:** See SDS for details; avoid inhalation and skin contact.
- **Transport:** Non-regulated; pack in sealed, labeled containers.
- **Disposal:** Follow local regulations.