



by  SOLARIS CHEM

# Lumerium C60

Cosmetics

## Description

**LUMERIUM C60** is a high-purity fullerene C60 ingredient designed specifically for **cosmetic and dermatological applications**. Known as a powerful "radical sponge", fullerene C60 neutralizes free radicals more effectively than vitamins C and E, making it a unique anti-aging and skin-protective active.

**LUMERIUM C60** Premium fullerene C60 for advanced cosmetic formulations. Clinically studied as a potent antioxidant and anti-aging active, **LUMERIUM C60** protects skin from oxidative stress, supports collagen, reduces wrinkles, and helps brighten the complexion. Available in ultra-high purity solvent-free and sublimed grades for reliable performance in skincare R&D.

## Key Benefits for Cosmetics:

- **Potent antioxidant capacity:** Protects skin from UV and pollution-induced oxidative stress.
- **Anti-aging effects:** Clinically demonstrated wrinkle reduction and anti-aging effects [Ref. 1].
- **Skin elasticity:** Helps preserve collagen and skin elasticity [Ref. 4].
- **Skin brightening:** Contributes to skin brightening by reducing melanin production [Ref. 5].
- **Stable in formulations:** Synergistic with vitamins and oils.

## References

- [Ref. 1] "Clinical evaluation of fullerene-C60 dissolved in squalane for anti-wrinkle cosmetics",  
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- [Ref. 3] "Anti-Inflammatory and Antioxidant Effects of Liposoluble Fullerene in Cosmetic Application",  
Author(s): M. Hui et al. - 2023. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9833127/>
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Author(s): Miljkovic, S. et al. - 2020. <https://doi.org/10.1111/jocd.12999>
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- [Ref. 6] "Study of the antioxidant capacity of fullerenes C60 in cosmetic formulations",  
Author(s): Marilena Antunes-Ricardo, Sofía Trinidad Ortiz-Buentello, Laura Eugenia Romero Robles, Yadira Itzel Vega-Cantú. - January 2024. DOI:10.18687/LACCEI2024.1.1.324



Lumerium C60  
**SOL5060-LM**

Available from **g level** (for R&D, Tech centers and universities) to **kg level** (for industrial developments).



### SOLVENT FREE GRADE:


**Grade 99.99% (SOL5060-LM-YY)**

Solvent-free\* 

### SUBLIMED GRADE:

**Grade 99.99% (SOL5060-LM-S)**

Solvent-free\*  . Sublimed

\*  These C60 products are going through further process in order to be highly soluble in organic solvents, oils and other related medias.

Time to dissolve/disperse in (provided as a guideline only):

**Toluene:** Few seconds to few minutes (max 3 g/L).

**o-DCB:** Few seconds to few minutes (max 24 g/L).

**Olive oil:** 3-5 days (to 0.8-1g/L, vs 2 weeks for most common C60 powder).

\* Solvents and volatiles are removed by subjecting the C60 to a controlled heat-cool process under dynamic inert medical nitrogen in order to suppress oxidation and preserve its pristine nature.



Green chemistry



Environmentally friendly

**SUSTAINABILITY** is at the core of what we do and our engine for growth, which is why we prioritize the use of **GREEN CHEMISTRY**, avoid wastes, recover and recycle solvents and materials as much as possible and use renewable hydro-electrical energy to power our operations.

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# Lumerium WS C60

Cosmetics Water soluble



## Description

**LUMERIUM WS C60** is a high-purity, water-soluble fullerene derivative (fullerenol C<sub>60</sub>(OH)<sub>x</sub>) designed specifically for **cosmetic and dermatological applications**. Unlike pristine fullerene, **LUMERIUM WS C60** disperses easily in aqueous systems such as serums, gels, and lotions, enabling broad formulation possibilities. Known as a potent “radical sponge”, fullerenol neutralizes multiple reactive oxygen species simultaneously, making it a unique anti-aging and skin-protective active.

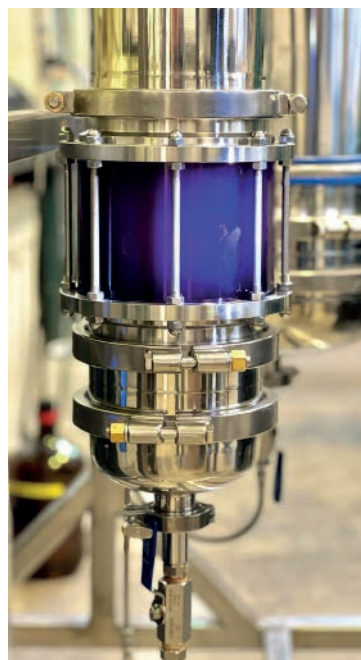
**LUMERIUM WS C60** delivers powerful antioxidant protection in serums, gels, and lotions — helping to reduce oxidative stress, support collagen integrity, and enhance skin vitality.

## Key Benefits for Cosmetics:

- **Potent antioxidant capacity:** Quenches free radicals in aqueous environments, protecting skin from oxidative stress.
- **Clinically studied protective effects** on cellular systems, reducing oxidative damage [Ref. 1].
- **Supports skin vitality and elasticity:** by modulating collagen integrity [Ref. 3].
- **Hydrophilic, formulation-friendly:** Ideal for serums, toners, and water-based emulsions.
- **Synergistic** with vitamins and other hydrophilic actives.

## References

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- [Ref. 2] “[60] Fullerene is a powerful antioxidant in vivo with no acute toxicity”,  
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- [Ref. 3] “Fullerenol nanoparticles: antioxidant and protective effects on skin and systemic oxidative stress”,  
Author(s): Injac, R. et al. - Biomaterials (2009).
- [Ref. 4] “Influence of hyper-harmonized fullerene water complexes on collagen and skin biophysics”,  
Author(s): Miljkovic, S. et al. - J. Cosmet. Dermatol. (2020).
- [Ref. 5] “Anti-Inflammatory and Antioxidant Effects of Fullerenol in topical application”,  
Author(s): Hui, M. et al. - (2023).
- [Ref. 6] “Study of the antioxidant capacity of fullerenols in cosmetic formulations”,  
Author(s): Antunes-Ricardo, M. et al. - LACCEI (2024).



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