

# 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”,  
Author(s):Shinya Kato, Hikaru Taira, Hisae Aoshima, Yasukazu Saitoh, Nobuhiko Miwa.  
October 2010 <https://doi.org/10.1166/jnn.2010.3053>

[Ref. 2] “Permeation of skin with (C60) fullerene dispersions”,  
Author(s): M. Martins, et al. 2017. (PMC article) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6999520/>

[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/>

[Ref. 4] “Influence of hyper-harmonized fullerene water complex on collagen molecules and biophysical properties of the skin”,  
Author(s): Miljkovic, S. et al. - 2020. <https://doi.org/10.1111/jocd.12999>

[Ref. 5] “Antioxidant property of fullerene is effective in skin whitening”,  
Author(s): (unnamed in abstract) - 2009. (Journal of the American Academy of Dermatology) “PVP-fullerene, due to its antioxidant properties, reduces UVA-induced melanogenesis ... 94% of subjects became fairer after 6 weeks”

[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.

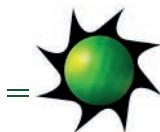


Green chemistry  
Environmentally friendly



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 C60(OH)x) 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

[Ref. 1] “Study of C60 fullerol as a powerful antioxidant in aqueous systems”,  
Author(s): Andrievsky, G.V. et al. - J. Nanoscience Nanotechnol (2002).

[Ref. 2] “[60] Fullerene is a powerful antioxidant in vivo with no acute toxicity”,  
Author(s): Gharbi, N. et al. - Toxicol. Lett. (2005).

[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 Fullerol 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).



## Lumerium WS C60 SOL5369-LM

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### SOLVENT FREE GRADE:

**Grade 99.99%** (SOL5369-LM-YY)  
Solvent-free\*

### SUBLIMED GRADE:

**Grade 99.99%** (SOL5369-LM-S)  
Solvent-free\*. Sublimed.

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

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