

Technical Data Sheet of G-Block DT 200 CCT

Product Description

Fine and stable dispersion of UV grade titanium dioxide in cosmetic oils at high % of active. It can be incorporated easily with the conventional equipments into any personal care products to provide the sun protection benefit.

Legislation

- INCI Titanium Dioxide (and) Caprylic/Capric Triglyceride (and) Alumina (and) Isostearic Acid (and) Polyhydroxystearic acid (and) Stearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Lecithin
- CAS # 13463-67-7/(65381-09-1;73398-61-5)/1344-28-1/30399-84-9/27924-99-8/29894-35-7/57-11-4/8002-43-5
- EINECS 236-675-5/(265-724-3; 277-452-2)/215-691-6/250-178-0/exempt/250-178-0/exempt/232-307-2

General Product Specification

| <u>Item</u> | <u>Specification</u> |
|--------------------|----------------------|
| Appearance | Off-white soft cream |
| Odor | Mild |
| Viscosity, 20 rpm | 10,000 – 150,000 cP |
| Specific Gravity | 1.45 – 1.75 |
| % TiO ₂ | 44 – 50% |

Safety data:

- Repeated Insult Patch Test (RIPT) with 50 human subjects shows no skin irritation and no skin sensitization.

----- **Create Possibilities** -----

Last product specification update: 6/1/2012 Last document update: 11/7/2017

- The titanium dioxide powder before the coating of a thin alumina layer (for further protection of skin against radicals) and dispersion meets with USP standard.
- Total heavy metal < 20 ppm, and Arsenic < 2 ppm
- Microbiology data: Total aerobic bacteria count and the total yeast/mold count < 100 cfu/g, free of Pathogens: E.Coli, P. Aeruginosa, and S. Aureus.

Features/Benefits

- Easy Manufacturing
 - Stable product, no separation and no sedimentation
 - Easy to transfer and to mix with the common cosmetic equipments
- Easy Formulation/product development
 - **COSMOS, ECOCERT and Natural Product Association (NPA) approved for natural sunscreens** which meet with global regulations
 - Speed to market: Provides the guide equations to calculate the appropriate % dosage for the target SPF and critical wavelength for quick formulation development
 - Extremely high % active for flexible formulation development with good sensory

Applications

Cosmetic and Toiletry:

- Natural sunscreens that meet with all global regulations for broad spectrum (with G-Block DTB 300 CCT) and “natural” standards. Sunscreens for baby and people with sensitive skin.
- Sport sunscreens with long lasting UV A (with G-Block DTB 300 CCT) and B protection.
- Daily skin care lotion and cream with UV A (with G-Block DTB 300 CCT) and B protection.
- Natural Color cosmetics with sunscreen benefit.

How to use it?

- Just add into the oil phase of the formulation and mix well.

----- **Create Possibilities** -----

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- Dosage: About 3 SPF per 1% TiO₂ active; Critical Wavelength 365 nm. For example, SPF 30 sunscreen would need: $30/3 = 10\%$ TiO₂ active or 22.3% G-Block DT 200 CCT ($22.3\% \times 46\% = 10.2\%$ TiO₂ active).
- For predicting the SPF and critical wavelength of sunscreen prototypes made of the blends of several G-Block products, please contact us for the "**G-Block Prediction Calculator**" program to do it easily.
- **Sunscreen Test Protocols:**
 - SPF: In-Vivo Protocols of FDA of USA and EN ISO 24444:2010.
 - UVA: In-Vivo protocol of EN ISO 24442:2011; In-Vitro Protocol of FDA of USA(critical wave) ; EN ISO 2443:2012 (UVAPF) .
 - Please note that in-vitro SPF measurement is not suitable for sunscreens of inorganic UV filters

Packaging

25 kg in 5 gallon plastic pail

Storage

- Store the product in its original package and avoid storing at extreme high and low temperature.

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----- **Create Possibilities** -----

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