

## 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 # 13463-67-7/73398-61-5/ 1344-28-1/30399-84-9/27924-99-8/57-11-4/(29894-35-7, 235783-76-3) /8002-43-5
- EINECS 236-675-5/277-452-2/215-691-6/250-178-0/exempt//200-313-4/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 <sub>2</sub>	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.

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- Dosage: About 3 SPF per 1% TiO<sub>2</sub> active; Critical Wavelength 365 nm. For example, SPF 30 sunscreen would need:  $30/3 = 10\%$  TiO<sub>2</sub> active or 22.3% G-Block DT 200 CCT ( $22.3\% \times 46\% = 10.2\%$  TiO<sub>2</sub> 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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