**Create elegant oil-in-water mineral sunscreens with Dermothix 100 - it works as your thickener, primary emulsifier & film former…. even with zinc oxide!) Dermothix 100 is a proven SPF water resistance booster, with both *in vitro* & *in vivo* results.**

Category: Suncare

**HS1-134: Dermothix 100 Mineral Sunscreen Lotion**

|  |  |  |  |
| --- | --- | --- | --- |
| *Ingredient* | *INCI* | *Supplier* | *W/W%* |
| Phase A |  |  |  |
| Water | Water | -- | 58.0 |
| 1,3 Butylene Glycol | Butylene Glycol | Alzo International | 2 |
| Phenoxetol | Phenoxyethanol | Clariant | 0.5 |
| Dermol CG | Caprylyl Glycol | Alzo International | 0.5 |
| XG FNCSP-PC | Xanthan Gum | Jungbunzlauer (Univar) | 0.5 |
| Dermothix 100 | **Disteareth-100 IPDI** | **Alzo International** | **3** |
| Phase B |  |  |  |
| G Block DTB 300 CCT | Titanium Dioxide (and) Capric Triglyceride (and) Isostearic Acid (and) Polyglyceryl-3-Polyricineoleate (and) Lecithin | Applechem | 8.3 |
| G Block DZ 370 CCT | Zinc Oxide (and) Capric Triglyceride (and) Isostearic Acid (and) Polyglyceryl-3-Polyricineoleate (and) Lecithin | Applechem | 7.2 |
| Elefac I-205 | **Octyldodecyl Neopentanoate** | **Alzo International** | **10** |
| Dermol 99 | **Isononyl Isononanoate** | **Alzo International** | **10** |
| Total |  |  | **100.0** |

*Approximate active sunscreen level: 5% Titanium Dioxide, 5% Zinc Oxide*

**Procedure:**

1. Combine water, butylene glycol & preservatives into main beaker and begin heating to 65-70° C then add Xanthan Gum to water under Silverson mixing. Once at 65-70° C and a transparent gel is formed, then add Dermothix 100 & mix until homogenous & clear
2. In side beaker, combine components of phase B, heat to 70° C and mix until all ingredients are well dispersed & melted.
3. Emulsify by add phase B to A under high shear for 10 minutes at 6,000 rpm, then begin cooling, mixing the remainder of the batch at 3,500 rpm.

**Alzo Product Benefits:**

**Dermol 99** – quick-drying and silky-feeling ester

**Dermothix 100** – water soluble thickener and gelling agent for aqueous systems; high internal phase o/w emulsifier; broad pH stability 2-12

**Elefac I-205 –** excellent organic sunscreens solubilizer and TiO2 & ZnO pigment wetter.