**Interested in a polymer that has the film-forming properties of a polyurethane, is naturally derived & easy to formulate with? Then let us introduce you to Polyderm PPI-DGDIS.**

Category: Sun Care

**HS2-046: Polyderm PPI-DGDIS Sunscreen Lotion SPF 30**

|  |  |  |  |
| --- | --- | --- | --- |
| Ingredient | INCI | Supplier | W/W% |
| Phase A |  |  |  |
| Water | Water | -- | 60.3 |
| 1,3 Butylene Glycol | Butylene Glycol | Alzo International | 2 |
| Phenoxetol | Phenoxyethanol | Clariant | 0.5 |
| Dermol CG | Caprylyl glycol | Alzo International | 0.5 |
| Dissolvine NA2-S | Disodium EDTA | Akzo Nobel | 0.2 |
| XG FNCSP-PC | Xanthan Gum | Jungbunzlauer | 0.5 |
| Dermothix 100 | **Disteareth-100 IPDI** | **Alzo International** | **3** |
| Phase B |  |  |  |
| Neo Heliopan 357 | Avobenzone | Symrise | 3 |
| Neo Heliopan 303 | Octocrylene | Symrise | 5 |
| Neo Heliopan OS | Octisalate | Symrise | 5 |
| Neo Heliopan HMS | Homosalate | Symrise | 5 |
| Elefac I-205 | Octyldodecyl Neopentanoate | Alzo International | 5 |
| Bernel Ester DCM | **Dicaprylyl Maleate** | **Alzo International** | **5** |
| Polyderm PPI-DGDIS | **Polyglyceryl-2 Diisostearate/**  **IPDI Copolymer** | **Alzo International** | **5** |
| Total |  |  | **100.0** |

**Manufacturing Procedure:**

1. Combine water, butylene glycol & preservatives into main beaker, heat to 65-70° C.
2. Add Dermothix-100 to main beaker, mix until incorporated into water phase.
3. In side beaker, combine components of phase B, heat to 70° C and mix until all ingredients are dissolved.
4. Emulsify by add phase B to A under high shear for 10 minutes at 6,000 rpm, then begin cooling. Mix the remainder of the batch at 3,000 rpm.

**Alzo Product Benefits:**

**Bernel Ester DCM** – lightweight, naturally derived ester with excellent powder sunscreen solvency. A great, less shiny alternative to synthetic sunscreen emollients

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

**Polyderm PPI-DGDIS** – 86% naturally-derived, urethane-based polymer; oil soluble, liquid film former that improves SPF water resistance