## TEN



Finally, a light weight SPF 50+. This high SPF sun protection cream is your skin ally all year around. Apply liberally.

- > HALLBRITE® EZ-FLO TDX is an easy-to-use and highly stable dispersion of Titanium Dioxide showing no particle perception and minimal whitening in use.
- Vida-Care USB-50+ is a photostable liquid blend of sunscreen actives which provides a broad spectrum UV-A and UVB protection.
- SunSpheres Powder is a SPF booster working with broad spectrum organic and inorganic UV filters, while maintaining waterproof characteristics.

- ) Dow Corning® ES 5373 Formulation AID is a cold-processable O/W emulsifier with very low odor. It supports high oil phase loading and various types of oils.
- Dow Corning® FA 4103 Silicone
   Acrylate Emulsion is a film former with excellent film flexibility, high wash-off resistance and no tackiness.
- Stabil ZERO is an alternative self-preserving option from Akema not listed in the EU as a preservative. It also has low odor.



| Trade name   | INCI name   | Function                           | Supplier                 | %    |
|--|---|------------------------------------|--------------------------|------|
| Phase A  |   |                                    |                          |      |
|  | Water (Aqua)  | Solvent                            | Univar*                  | Q.S  |
| SunSpheres™ Powder                                 | Styrene/Acrylates Copolymer   | SPF booster                        | Dow / Univar*            | 5.7  |
| Dow Corning® RM 2051<br>Thickening Agent           | Sodium Polyacrylate (and) Dimethicone (and)<br>Cyclopentasiloxane (and) Trideceth-6 (and)<br>PEG/PPG-18/18 Dimethicone  | Thickening and stabilizing agent   | Dow / Univar*            | 2.0  |
| Stabil ZERO  | Pentylene glycol, Caprylyl glycol,<br>Ethylhexylglycerin  | Alternative preservative           | Akema / Univar*          | 1.5  |
| Phase B  |   |                                    |                          |      |
| Dow Corning® ES 5373<br>Formulation AID            | PEG-12 Dimethicone  | O/W Emulsifier                     | Dow / Univar*            | 3.5  |
|  | C12-15 Alkyl Benzoate   | Emollient – solvent for UV filters | Univar*                  | 10.0 |
| XIAMETER® PMX 200<br>Silicone Fluid 2 cSt          | Dimethicone   | Emollient                          | Dow / Univar*            | 4.0  |
| HALLBRITE® EZ-FLO TDX                              | Butyloctyl Salicylate, Titanium Dioxide (nano),<br>Triceteareth-4 Phosphate, Dimethicone<br>Crosspolymer, Silica  | Mineral UV filter dispersion       | Hallstar / Univar*       | 5.0  |
| Vida-Care USB-50+                                  | Diethylamino Hydroxybenzoyl Hexyl<br>Benzoate, Ethylhexyl Methoxycinnamate,<br>Octocrylene, Ethylhexyl Triazone, Di-C12-13<br>Alkyl Malate, Ethylhexyl Salicylate,<br>Diisopropyl Adipate | UV filter blend                    | Lambson / Univar*        | 15.0 |
| Phase C  |   |                                    |                          |      |
| Blue Ozone SY154959                                | Fragrance   | Fragrance                          | Kao Fragrances / Univar* | 0.1  |
| Dow Corning® FA 4103<br>Silicone Acrylate Emulsion | Acrylates/Polytrimethylsiloxymethacrylate<br>Copolymer and Laureth-1 Phosphate  | Film former, wash-off resistance   | Dow / Univar*            | 4.0  |

## Procedure (Cold process

- Disperse the SunSpheres<sup>™</sup> Powder into the water and apply high shear (Silverson at 10 000 rpm) for 30 minutes
- 2. Add the other ingredients of phase A while mixing
- 3. Mix ingredients of phase B together until homogenous
- 4. Add slowly phase B to phase A while mixing (800 rpm)
- 5. Add ingredients of phase C one by one while mixing

## Stabilit

Stable at least 2 months at 4°C, RT and 40°C (still ongoing).

## Comment

- SPF 50+: measured SPF in vitro = 77.8
- Water resistant: wash-off resistance ratio = 78%
- pH = 5.63
- Viscosity (spindle 5; 50 rpm; 1 min)
   = 3,392 cPs (42.4 %)
- Application: Squeeze out a small amount of cream and massage onto your sun exposed skin (avoid the eye area).
- · Off-white thin cream

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\* Please contact your regional Univar sales representative to ensure that mentioned products are distributed in your country.

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