




Room temperature compounding is afforded by the liquid state of both **Emulsiderm MPN** and UV filter blend **Uvasorb® Complete**. This breakthrough concentration of UV filters is scalable up to SPF 50 meeting Colipa parameters for UV-A/UV-B broad spectrum protection. **Rapidigel® E22** locks in the stability of this high SPF sunscreen formula.

| |  Components |  INCI Declaration |  % |  Function |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phase I | Deionized Water Disodium EDTA Butylene Glycol | Aqua Disodium EDTA Butylene Glycol | Up to 100 0.05 2.00 | Solvent Chelating agent Emulsion aid, detackifier |
| Phase II | Emulsiderm MPN Uvasorb® Complete Sensoderm DBA Naturederm DDG Rapidigel® E22 AMP-95 ^(A) | Polyglyceryl-6 Laurate (and) Caprylic/Capric Trglyceride (and) Olive Oil Polyglyceryl-6 Esters (and) Lecithin Octyl Pelargonate (and) Diethylhexyl Butamido Triazone (and) Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (and) Diethylamino Hydroxybenzoyl Hexyl Benzoate Dibutyl Adipate Bis-Octyldodecyl Dimer Dilinoleate/Propanediol Copolymer Dicaprylyl Ether (and) Acrylates/Vinyl Isodecanoate Crosspolymer (and) Aminomethyl Propanol Aminomethyl Propanol | 4.00 35.00 1.50 3.00 1.60 pH 6.5 - 7.0 | Emulsifier blend from renewables UV filter blend Detackifying emollient Water resistance agent Thickener, stabilizer Alkali neutralizer |
| Phase III | Activederm RP Spectrastat GHL Natural ^(B) F29537 Sandalwood Blue Sage ^(C) | Oryza Sativa (Rice) Starch Caprylhydroxamic Acid (and) Glyceryl Heptanoate (and) Propanediol Parfum | 2.00 1.50 0.50 | Sensorial agent Natural preservative Fragrance |

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|----------------------------------|---------------------------------------|
| Appearance | Uniform smooth pastel yellow emulsion |
| pH (as is) | 6.50 – 7.00 |
| Viscosity RV #5 @ 10 rpm | 20,000 – 25,000 cps |
| SPF value <i>in vitro</i> (est.) | 45 – 55 |

Procedure:

1. Add deionized water to the main vessel.
2. Begin agitation with a turbine mixer and add the remaining Phase I ingredients. Mix until the Disodium EDTA is completely dissolved.
3. To Phase I, add Phase II materials **in the listed order** while mixing. After the final Phase II material is added, mix at high speed with sweep until the lotion appears smooth and uniform. Adjust AMP-95 % w/w as needed to target pH 6.5-7.0.
4. Add Phase III items in the order given and mix until uniform. Homogenize for 5 minutes at 3500 rpm.

Sources:

- A. Advancion
- B. Inolex
- C. Aromatic Fragrances International

Compliance Regions for UV Filters: EU and LATAM

All information on this formulation is of a general nature and is furnished for your knowledge and understanding only. User assumes all risk of use, storage or handling, whether in accordance with directions or not.