

Sun Cream with LIPOID Emulsifiers

A Formulation to showcase some of our best Suncare ingredients. **Floramac® 10** is an excellent solvent for sunscreens with a dry emollient feel. **Floraesters K-20W®** has water resistancy benefits showing an improvement in SPF of 28% after submersion in certain systems. **MelanoBronze** offers natural protection against UV radiation whilst adding an attractive tan to the skin.

| | Trade Name | INCI Name | Function | %W/W | Supplier |
|----|-----------------------------|---|---------------------------------|-------|--|
| 1 | Deionized Water(1) | Aqua | Solvent | 50.28 | |
| 2 | Versene® Na2 Crystals | Disodium EDTA | Chelating Agent | 0.05 | Dow Chemical |
| 3 | RESPLANTA® MAC | Macadamia Seed Oil Glycereth-8 Esters | Humectant | 1 | Res Pharma Via ProTec Ingredia |
| 4 | LIPOID P 100 | Phosphatidylcholine, Tocopherol | Emulsifier | 1.5 | Lipoid Kosmetik UK |
| 5 | PHOSPHOLIPON® 80 H | Hydrogenated Lecithin | Emulsifier | 1.5 | Lipoid Kosmetik UK |
| 6 | euxyl®PE9010 | Phenoxyethanol and Ethylhexylglycerin | Preservative | 1.1 | Schulke UK |
| 7 | Unimer U-6 | Tricontanyl PVP | Film Former | 1 | Guivudan Active Beauty Via ProTec Ingredia |
| 8 | Floraesters® 30 | Jjoba Esters | Emollient ester | 1.3 | Floraetch Via ProTec Ingredia |
| 9 | Parsol®1789 | Butyl Methoxydibenzoylmethane | Sunscreen | 3 | Adina |
| 10 | Parsol® 340 | Octocrylene | Sunscreen | 10 | Adina |
| 11 | Parsol® EHS | Ethylhexyl Salicylate | Sunscreen | 5 | Adina |
| 12 | T-Lite™ SF-S | Aluminum Hydroxide, Dimethicone/Methicone Copolymer, Hydrated Silica , Titanium Dioxide | Sunscreen | 4.12 | BASF Corporation |
| 13 | Worlée Thix 100 | Acrylates Crosspolymer | Thickener | 2 | Worlee De Via ProTec Ingredia |
| 14 | Floramac® 10 | Ethyl Macadamiate | Emollient | 5 | Floraetch Via ProTec Ingredia |
| 15 | Tinosorb® S | Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine | Sunscreen | 2 | BASF Corporation |
| 16 | Sodium Hydroxide (Solution) | Sodium Hydroxide | Neutraliser | 0.15 | |
| 17 | Organic Glycerin | Glycerin | Humectant | 2 | ProTec Botanica |
| 18 | Deionized Water(2) | Aqua | Solvent | 5 | Floraetch Via ProTec |
| 19 | Floraesters K-20W® Jjoba | Hydrolyzed Jjoba Esters (and) Water | Water resistance | 2 | Floraetch Via ProTec Ingredia |
| 20 | MelanoBronze | Vitex Agnus Castus Extract (and) Acetyl Tyrosine (and) Glycerin (and) Alcohol (and) | Tan enhancing active ingredient | 2 | Mibelle Via ProTec Ingredia |

ProTec Ingredia Ltd

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Registered in London No. 07517784 VAT No. GB 100 2120 14

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Method of Manufacture

Into the main vessel add:

| | | |
|---------------------------|----------------------------------|---|
| Purified Water | Start the mixer on a fast speed. | |
| Disodium EDTA | Mix until dissolved. | |
| RESPLANTA® MAC | Mix until dissolved. | |
| Lipoid P 100 | Mix until dispersed. | |
| PHOSPHOLIPON® 80 H | Mix until dispersed. | |
| euxyl®PE9010 | Mix until dispersed. | Commence heating the main vessel to 80C |

Into a suitable sized premix vessel add:

| | | |
|------------------------|-----------------------|--|
| Unimer U-6 | | |
| Floraesters® 30 | | |
| Parsol®1789 | | |
| Parsol® 340 | | |
| Parsol® EHS | | |
| T-Lite™ SF-S | | |
| Floramac® 10 | | |
| Tinosorb® S | Mix until homogenous. | Commence heating the premix vessel to 80C. |

Add the premix vessel to the main vessel, stir rapidly to create an uniform emulsion.

Homogenise for 5 minutes.

Begin cooling to 23C.

Into the main vessel add:

| | |
|------------------------|-----------------------|
| Worlée Thix 100 | Mix until homogenous. |
| Sodium Hydroxide | Mix until homogenous. |

Into a suitable sized premix vessel add:

| | |
|----------------------------------|--------------------|
| Floraesters K-20W® Jojoba | |
| Glycerin | |
| Water(2) | Mix until uniform. |

When the product is 60C or below. Add the premix into the main vessel.

Mix at moderate speed.

Continue cooling to 23C.

When the product is 40C or below into the main vessel add:

MelanoBronze

Cool to 23C and check product specifications.

Product Specifications

| | |
|------------|---|
| pH | 5.50-6.50 |
| Viscosity | 30,000-40,000 cps RVTB speed 2.5, 1 minute. |
| Colour | White\Off white |
| Appearance | Silky, shiny, opaque emulsion. |

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