



# High Protection, Water Resistant Sun Cream (Indicative In-vivo wash-off resistance SPF 21.2/19.2) Oil-in-Water Cream: SPF Enhancement, Wash-Off Resistance

Formulation 00126

**ATTRIBUTES**

- Quick Absorption
- Reduced Gloss
- Silky Feel
- SPF Enhancement
- Wash-Off Resistance

**DOW CORNING® PRODUCTS**

- DOW CORNING® 2501 COSMETIC WAX
- DOW CORNING® 2502 COSMETIC FLUID
- DOW CORNING® 556 FLUID

**XIAMETER® PRODUCTS**

- XIAMETER® PMX-0345 CYCLOSILOXANE BLEND

Ingredient	Wt. %	Trade Name/Supplier
Phase A		
1. Octyl Methoxycinnamate	6	Parsol MCX / DSM Nutritional Products
2. Butyl Methoxydibenzoylmethane	3	Parsol 1789 / DSM Nutritional Products
3. 3-Methylbenzylidene Camphor	3	Parsol 5000 / DSM Nutritional Products
4. Phenyl Trimethicone	3	DOW CORNING® 556 FLUID
5. Cetyl Dimethicone	2.5	DOW CORNING® 2502 COSMETIC FLUID
6. Glyceryl Stearate	3	Cithrol GMS / Croda
7. C12-15 Alkyl Benzoate	4	Crodamol AB / Croda
8. Cetyl Alcohol	0.25	
9. Methylparaben	0.15	
10. Propylparaben	0.1	
11. BHT	0.05	BHT / Merck KGaA
Phase B		
12. Potassium Cetyl Phosphate	2	Amphisol K / DSM Nutritional Products
Phase C		
13. Carbomer	10	Carbopol 980 / NOVEON / Lubrizol
14. Propylene Glycol	2.5	
15. Potassium Hydroxide	q.s.	
16. Helianthus Annuus (Sunflower) Seed Oil	0.1	Titriplex® III Solution / Merck KGaA

17. Distilled Water	to 100	
Phase D		
18. Cyclopentasiloxane (and) Cyclohexasiloxane	4	XIAMETER® PMX-0345 CYCLOSILOXANE BLEND
19. Tocopheryl Acetate	0.5	Vitamin E Acetate / DSM Nutritional Products
Phase E		
20. Phenylbenzimidazole Sulfonic Acid	2	Parsol HS / DSM Nutritional Products
21. Distilled Water	20	
22. Potassium Hydroxide	q.s.	
23. Bis-PEG-18 Methyl Ether Dimethyl Silane	2	DOW CORNING® 2501 COSMETIC WAX

#### Procedure

1. Mix ingredients of phase C together.
2. Adjust pH to 7 with KOH.
3. Heat to 75°C.
4. Mix ingredients of phase A together and heat to 85°C.
5. Add phase B to phase A with gentle mixing.
6. Add phase C to combined phases A and B under strong agitation and continue mixing while cooling to 45°C.
7. Mix phase D ingredients and add to the previous combined phases with strong agitation.
8. Mix phase E ingredients ,except ingredient 23, adjust to pH 7 with KOH. Heat to 30°C. an add ingredient 23. Add to previous combined phases.
9. Check pH of final formulation and adjust to 7.0 with KOH, if necessary.
10. Add deionised water to compensate for water loss during heating phase.

#### Variations

2502 COSMETIC FLUID can be replaced with 2503 COSMETIC WAX

556 FLUID can be replaced with 560 COSMETIC GRADE FLUID

#### Stability

Stable for 6 months at room temperature and 3 months at 40°C.

#### External Reference Material

No external references identified as of this printing.

Dow Corning® Application Patents

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