

# FORMULATION example

## MDA-S-146-01 Oceans 13 mineral cream SPF 50, broad spectrum

### Ingredients

	INCI (US)	[%]
<b>A</b>		
<b>Eusolex® T-2000</b>	(1) TITANIUM DIOXIDE (AND) ALUMINA (AND) SIMETHICONE	<b>4.00</b>
<b>RonaCare® Ectoin</b>	(1) ECTOIN	<b>1.00</b>
Glycerol, anhydrous	(1) GLYCERIN	3.00
Vanzan NF	(2) XANTHAN GUM	0.40
<b>RonaCare® Disodium EDTA</b>	(1) DISODIUM EDTA	<b>0.10</b>
Water, demineralized	WATER	ad 100
<b>B</b>		
<b>Eusolex® T-2000</b>	(1) TITANIUM DIOXIDE (AND) ALUMINA (AND) SIMETHICONE	<b>3.50</b>
<b>Eusolex® T-S</b>	(1) TITANIUM DIOXIDE (AND) ALUMINA (AND) STEARIC ACID	<b>6.00</b>
<b>RonaCare® AP</b>	(1) BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYL MALONATE	<b>1.50</b>
<b>Oxynex® ST Liquid</b>	(1) DIETHYLHEXYL SYRINGYLIDENE MALONATE (AND) CAPRYLIC/CAPRIC TRIGLYCERIDE	<b>0.50</b>
Montanov 202	(3) ARACHIDYL ALCOHOL (AND) BEHENYL ALCOHOL (AND) ARACHIDYL GLUCOSIDE	3.50
Montanov 14	(3) MYRISTYL ALCOHOL (AND) MYRISTYL GLUCOSIDE	1.50
Cetiol® AB	(4) C12-15 ALKYL BENZOATE	3.00
Miglyol 812	(5) CAPRYLIC/CAPRIC GLYCERIDES	8.00
Arlamol HD	(6) ISOHEXADECANE	2.00
<b>C</b>		
<b>RonaFlair® LDP White</b>	(1) SODIUM POTASSIUM ALUMINIUM SILICATE (AND) TITANIUM DIOXIDE (AND) SILICA	<b>3.00</b>
BRB PTM 20	(7) PHENYL TRIMETHICONE	2.00
Preservatives	PRESERVATIVES	q.s.
Fragrance	FRAGRANCE	q.s.

### Procedure:

For phase A weigh in RonaCare® EDTA, Ectoin, water and glycerin and mix until all ingredients dissolve. Slowly add xanthan gum and mix until well dispersed (with light heating up it dissolves faster). Prepare phase B ingredients in a separate beaker. Heat phase A and B to 75-80°C. Disperse Eusolex® T-2000 using a dissolver blade in phase A and phase B, as well as Eusolex® T-S. Add B to A and homogenize. Cool to 40°C. Then add phase C, one ingredient at a time. Homogenize and cool down.

### Notes:

# FORMULATION EXAMPLE

Appearance: white to offwhite cream (o/w)

pH (23°C): 6.8

Viscosity: 34,000 mPa.s (Brookfield RVT, Helipath spindle C, 10 rpm) at 23°C

Stability: 3 months at 40°C, FTC (5°C-40°C), 5°C, RT and 1 week at 50°C

## Suppliers:

(1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials

(3) Seppic

(5) Sasol

(7) Stockmeier Chemie

(2) R. T. Vanderbilt Company Inc

(4) BASF AG

(6) Croda

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