

# Formulation Example

## MDA-S-153-01 Aerosol Sun Protection Face Foam in vivo SPF 53.9, (ISO24444,2010: 5 volunteers)

Ingredients	Art. No.	INCI EU (INCI US, if different)	[%]
<b>A1</b>			
Eusolex® OCR	1.05377 (1)	OCTOCRYLENE	10.00
Eusolex® OS	1.06949 (1)	ETHYLHEXYL SALICYLATE ( <i>OCTISALATE</i> )	5.00
Eusolex® HMS	1.11412 (1)	HOMOSALATE	5.00
Eusolex® BEMT	1.32992 (1)	BIS-ETHYLHEXYLOXYPHENOL METHOXYPHENYL TRIAZINE ( <i>NOT REGISTERED</i> )	3.00
Eusolex® 9020	1.05844 (1)	BUTYL METHOXYDIBENZOYLMETHANE ( <i>AVOBENZONE</i> )	5.00
Eusolex® EHT	1.32994 (1)	ETHYLHEXYL TRIAZONE ( <i>NOT REGISTERED</i> )	1.00
Tegin® M Pellets	(2)	GLYCERYL STEARATE	1.25
Lanette® O	(3)	CETEARYL ALCOHOL	1.25
Tegosoft® TN	(2)	C12-15 ALKYL BENZOATE	8.00
Cetiol® CC	(3)	DICAPRYLYL CARBONATE	6.00
<b>A2</b>			
Eusolex® T-2000	1.05373 (1)	TITANIUM DIOXIDE (NANO) ( <i>TITANIUM DIOXIDE</i> ), ALUMINA, SIMETHICONE	4.00
<b>B1</b>			
Eusolex® 232 USC	1.32429 (1)	PHENYLBENZIMIDAZOLE SULFONIC ACID ( <i>ENSULIZOLE</i> )	2.00
Neutralizing agent (q.s.)			1.30
Complexing agent (q.s.)			0.05
Glycerol 85%		GLYCERIN, AQUA ( <i>WATER</i> )	5.00
Water, demineralized		AQUA ( <i>WATER</i> )	ad 100
<b>B2</b>			
Amphisol® K	(4)	POTASSIUM CETYL PHOSPHATE	2.00
<b>B3</b>			
Protelan AGL 95/C	(5)	SODIUM COCOYL GLUTAMATE	1.00
<b>C</b>			
Preservatives		PRESERVATIVES	q.s.
Fragrance		PARFUM ( <i>FRAGRANCE</i> )	q.s.
<b>D</b>			
Propellant			10.00

### Procedure:

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Dissolve the neutralizing agent in the water of phase B1; add Eusolex® 232 and stir until a clear solution is obtained. Then add the remaining ingredients of phase B1. Heat up phase A1 and B1 to 80°C. Disperse phase A2 into phase A1. Add phase B2 while stirring to phase B1. Stir phase B1/2 for 10 minutes at 80°C. Afterwards add phase B3 to phase B1/2 while stirring. Add phase A into phase B while stirring. Homogenize. Add phase C at 45°C while stirring. Adjust pH value to 6.8-7.5. Fill into containers and pressurize with phase D.

**Notes: Not allowed in US/Canada**

Appearance: off-white (o/w)

pH (24°C): 7.4

Viscosity: 5,400 mPa.s (Brookfield DV-II+, Helipath, spindle B, 10 rpm) at 24°C

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

-Shake before use-

**Suppliers:**

(1) Susonity Commercial GmbH, Germany and/or its affiliates

(3) BASF AG

(5) Zschimmer & Schwarz GmbH & Co

(2) Evonik Nutrition & Care GmbH

(4) DSM

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