

Creamy Pre-Sun Gel

SU-0010

This formulation demonstrates the use of **Novemer**[®] * **EC-1 Polymer** as a rheology modifier and sensory enhancing agent. **Novemer**[®] * **EC-1 Polymer** improves the appearance, the pick-up, and the texture of the gel. **Carbopol**[®] * **Ultrez 21 Polymer** is used as a buffer in order to increase the viscosity of the gel at low pH.

		INCI Name, Trade Name	Weight %	Function
A.	1.	Deionized Water	76.02	Diluent
	2.	Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Carbopol [®] * Ultrez 21 Polymer	0.40	Rheology Modifier
	3.	Sodium Hydroxide (18%)	0.05	Neutralizer
B.	4.	Ethoxydiglycol Oleate, <i>Softcutol</i> [®] O	15.00	Emollient
	5.	DMDM Hydantoin, <i>Glydant</i> [®]	0.40	Preservative
	6.	Tocopheryl Acetate, <i>Vitamin E Acetate</i>	0.50	Antioxidant
C.	7.	Juglans Regia (Walnut) Seed Extract, <i>Gatuline</i> [®] Age Defense	6.00	Botanical Extract
D.	8.	Acrylates/Acrylamide Copolymer (and) Mineral Oil (and) Polysorbate 85, Novemer [®] * EC-1 Polymer	1.00	Emulsifier/ Rheology Modifier
E.	9.	FD&C Yellow No. 6 (0.1%)	0.08	Dye
	10.	D&C Orange No. 4 (0.1%)	0.08	Dye
	11.	Fragrance, <i>Perfume "Fleur de Vanille"</i>	0.32	Fragrance
	12.	Sodium Hydroxide (18%)	0.15	Neutralizer

Procedure:

1. Sprinkle **Carbopol**[®] * **Ultrez 21 Polymer** on the surface of deionized water. After the polymer has thoroughly wet-out, mix at low speed.
2. Pre-neutralize **PART A** with sodium hydroxide.
3. Combine **PART B** ingredients with slow agitation. Add **PART B** to **PART A**.
4. Add **PART C** ingredient, and mix slowly until uniform.
5. Add **PART D** ingredient, and mix until uniform.
6. Add **PART E** ingredients in order, and mix until uniform.

Product Properties:

Appearance Slightly beige to yellow, viscous, creamy gel
pH 5.5 – 5.8
Viscosity (mPa·s)** 32,000 – 36,000
Stability: Passed 3 months @ 45 °C, 5 cycles freeze/thaw

Novemer[®] * **EC-1 Polymer** Solids (wt. %): 0.27

** Brookfield RVT @ 20 rpm, 25 °C, #6 spindle, after 24 hours

Supplier References:

Noveon, Inc. (2, 8)

Gattefossé (4, 7)

Lonza (5)

DSM Nutritional (6)

Ipra France, S.A. (11)

Quantum Colours (9, 10)

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