

High Viscosity Grooming Gel

S-G0028

Excellent performance in high viscosity gels is readily achieved with **Carbopol®** and **Fixate®** Polymers. This economical formulation has a smooth, aesthetically-pleasing texture and outstanding humidity resistance—even with just 0.80 (% TS) **Fixate®** Polymer. **SilSense™** Copolyol-1 Silicone serves the dual role of conditioning agent and wet styling aid.

	INCI Name, Trade Name	Weight %	Function
1.	Deionized Water	94.08	Diluent
2.	Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Carbopol® * Ultrez 21 Polymer	0.90	Rheology Modifier
3.	Polyacrylates-14 (~30% total solids), Fixate® * PLUS Polymer	2.67	Fixative
4.	Tetrasodium EDTA, Liquid (38%), Versene® 100 XL	0.05	Chelating Agent
5.	Caramel, Caramel Color – AP-100	1.50	Dye
6.	PEG-33 and PEG-8 Dimethicone and PEG-14, SilSense™ * Copolyol-1 Silicone	0.20	Conditioner / Resin Plasticizer
7.	Phenoxyethanol, Methyl-, Ethyl-, Butyl-, Propyl-, and Isobutylparaben, Phenonip®	0.50	Preservative
8.	Aminomethyl Propanol (95%), AMP-95®	~0.10**	Neutralizer

**q.s. to pH 6.8 – 7.2

Procedure:

1. Weigh deionized water into vessel large enough to provide adequate mixing while preparing batch.
2. Sprinkle **Carbopol®** * **Ultrez 21 Polymer** onto the surface of the deionized water. Allow the **Carbopol®** * **Ultrez 21 Polymer** to fully hydrate (approximately 10 – 20 minutes).
3. Adjust mixing speed to create a small vortex, but not cause any splashing.
4. Slowly add the **Fixate®** * **PLUS Polymer** to the mixing vessel. Mix for approximately 5 minutes.
5. Slowly add ingredients #4 - #7 to the mixing vessel. Mix well after the addition of each ingredient.
6. Neutralize to pH 6.8 – 7.2 using **AMP-95®**. Scrape sides of the vessel to incorporate all ingredients into the gel, assuring homogeneity.
7. Allow the final product to mix for five minutes prior to packaging.

Product Properties:

Appearance Caramel Color
pH 6.8 – 7.2
Viscosity, (mPa s)*** 75,000 – 85,000
Stability: Passed 3 months @ 45°C, 5 cycles freeze/thaw

Fixate® * **PLUS Polymer**(% TS), 0.80%

*** Brookfield RVT @ 20 rpm, 25 °C, #7 spindle, Measured after 24 hours

Supplier References:

Noveon, Inc. (2, 3, 6)

Dow Chemical (4, 8)

Quantum Colours (5)

Clariant (7)

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