

# Hair Dye formulation with Zemea® and SharoSense Plus 181-N

ACT25970

**Ingredients:** Water, Behentrimonium Methosulfate (and) Cetyl Alcohol (and) Butylene Glycol, Cetearyl Alcohol, Caprylic/Capric triglyceride, Glycolic acid 70, HC Blue 15, Basic yellow 57, Propanediol, Maltol (and) Polyquaternium 80, Isopropyl Alcohol.

Phase	Ingredient	INCI name	Supplier	Function	Wt.%
A	Water	Agua		Solvent	71.33%
A	Incroquat Behenyl TMS-50-MBAL-PA	Behentrimonium Methosulfate (and) Cetyl Alcohol (and) Butylene Glycol	Croda	Emulsifier	6.00%
A	Cetearyl Alcohol	Cetearyl Alcohol		Emulsifier	5.00%
B	Caprylic/Capric triglyceride	Caprylic/Capric triglyceride		Emollient	2.00%
C	Glypure 70	Glycolic acid 70	PureTech Scientific	Acid	0.40%
D	Arianor Jade Blue 306085	HC Blue 15	Sensient Beauty	Color	0.07%
D	Arianor Straw Yellow 306005	Basic yellow 57	Sensient Beauty	Color	0.20%
D	<b>Zemea® propanediol</b>	<b>Propanediol</b>	<b>Primient Covation</b>	<b>Fixative</b>	<b>3.00%</b>
D	SharoSENSE™ Plus 181-N	Maltol (and) Polyquaternium 80	Sharon Personal Care		1.00%
D	Water	Agua		Solvent	10.00%
D	Isopropyl Alcohol	Isopropyl Alcohol		Solvent	1.00%
E	Glypure 70	Glycolic acid 70	PureTech Scientific	Acid	q.s.
	Total				100.00%

Formula provided by: ACT Solutions Corp., Newark, Delaware, USA

## Manufacturing Procedure

1. Heat Phase A to a minimum of 80°C with axial-flow propeller stirring.
2. Continue heating and stirring until all components in Phase A are fully melted.
3. Maintain stirring and periodically sample the mixture until a cooled sample shows no visible solid matter.
4. Remove heat and add Phase B to the mixture while maintaining continuous stirring.
5. Allow the mixture to cool. Once cooled, add Phase C to the A/B mixture with stirring until the batch is uniform and smooth.
6. Premix Phase D separately.
7. When the A/B/C mixture begins to solidify, incorporate Phase D with propeller stirring and continue until uniform.
8. Add Phase E gradually to adjust the final pH to the target range of 4.8–5.2.