

C-159

CONDITIONING SHAMPOO

NATURAL HAIR

GUIDELINE FORMULARY

DESCRIPTION

Improves hair feeling
Slight conditioning properties
Reduces fly-away effect from combing

COMPOSITION

	%
EMAL® 227E ⁽¹⁾	38.0
BETADET® HR	10.0
BETADET® S-20	3.9
DANOX® PL-10	3.0
EMANON® EV-E	2.0
PEG-12 Dimethicone ⁽²⁾	0.5
Guar Hydroxypropyl Trimonium Chloride ⁽³⁾	0.3
KAO Fragrance	q.s.
Preservative ⁽⁴⁾	q.s.
NaOH (10% solution)	q.s.
Deionized Water	Up to 100

(1) 38% of EMAL® 227E (SLES at 27% a.m.) can be substituted by 14.7% of EMAL® 270D (SLES at 70% a.m.)

(2) Dow Corning® 193 Fluid from Dow Corning

(3) Jaguar® C-17 from Solvay Novecare

(4) Isocil® PC from Lonza

TECHNICAL CHARACTERISTICS

Kao Method

APPEARANCE (20°C):	White pearled viscous liquid	KCSA-258
pH (as it is):	Approx. 6.5	KCSA-014
VISCOSITY BROOKFIELD (20°C, cP):	Approx. 10,000	KCSA-227
DRY MATTER (%):	Approx. 17	KCSA-092
STABILITY TEST:	Correct	(1 month 40°C/RT/5°C)

RECOMMENDED OPERATIVE METHOD

Add Guar Hydroxypropyl Trimonium Chloride to the Deionized Water and stir until a homogeneous dispersion is obtained.

Add EMAL® 227E, BETADET® HR, BETADET® S-20, and EMANON® EV-E. Homogenize after each addition.

Add PEG-12 Dimethicone and DANOX® PL-10. Homogenize after each addition.

Add the rest of additives: preservative (soluble), perfume (15 minutes of agitation are usually needed to solubilize it), dye(s) (diluted in water), other (extracts, etc).

Adjust pH (it is recommended to use citric or lactic acid, and diluted sodium hydroxide if an increase is necessary).

Adjust the final desired viscosity using Sodium Chloride.

COMMENTS - APPLICATION

If high conditioning effect is desired, other type of components can be added (extracts, protein hydrolyzates, cationic polymers, etc) taking always under consideration supplier advises.

If EMAL® 270D is used (70% a.m.), it is recommended to heat Deionized Water up to 45°C approx. before adding it, and afterwards to continue with the other components.

Different viscosity levels can be achieved using variable NaCl quantities.

Compared to similar products used as refatting and solubilizing agents as well, like PEG-6-Caprylic/Capric Glycerides, EMANON® EV-E has an outstanding effect on the foam (speed formation, volume and EMANON® EV-E improves conditioning effect and combing force as well, reducing the strength that has to be applied to comb a tress.

COMPONENTS

BETADET® HR (Cocamidopropyl Betaine, ≈ 35% dry matter): amphoteric character. Secondary surfactant. It decreases the irritation level of the anionic surfactants on the skin, improving level and quality of the foam. Additional thickening affect.

BETADET® S-20 (Lauryl Hydroxysultaine, ≈ 38% a.m.): amphoteric character. Very mild co-surfactant. It decreases the irritation level of anionic surfactants, improving the quality of the foam and performing also as a thickener. It improves the stability of the formula at extreme pH's and low temperature.

DANOX® PL-10 (pearling concentrate, ≈ 52% dry matter): anionic and non-ionic character. Nitroso-amines free product (its composition doesn't contain any Nitrogen derivative). It allows modifying the final appearance of the formula, providing it with a beautiful pearled appearance. No heating is needed. Ecological product. Suggested dosage: 3 - 10%.

EMAL® 227E (Sodium Laureth Sulfate, ≈ 27% a.m.): anionic character. Primary surfactant, highly foaming. Good detergent properties.

EMANON® EV-E (Glycereth-7 Caprylate/Caprata, ≈ 100% a.m.): non-ionic character. Vegetable based, liquid product. Excellent emulsifier and solubilizer for hydrophobic materials, with HLB ≈ 16. Suitable for both rinse-off and leave-on products in hair and body applications. Key ingredient to achieve high foamability and smooth feeling.

The information and recommendations in this publication are to the best of our knowledge reliable. However, nothing herein is to be construed as a warranty or representation. Users should make their own tests to determine the applicability of such information or the suitability of any products for their own particular purpose.

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