## Zemea®\* the Natural Choice... Purity and Renewable Performance



## Zemea® renewably sourced<sup>™</sup> propanediol

## Zemea® Creamy Facial Cleanser

This room temperature process cleanser features naturally-derived, mild and biodegradable powder acyl-amino acid surfactants used in conjunction with glycerin and propanediol to produce a light and airy cream cleanser form. Its silky foam and creamy lather produce a great face wash; the after-feel of the skin is conditioned and soft to the touch.

PHASE	TRADE NAME	SUPPLIER	INCI NAME	% w/w	FUNCTION (IN FORMULA / ON SKIN)
A1	Vanzan NF-C	RT Vanderbilt	Xanthan gum	0.25	Rheology modifier, stability
A2	Dionized water		Aqua	q.s to 100	Diluent
А3	Zemea® Propanediol	DuPont Tate & Lyle Bio Products	Propanediol	10.00	Solubility adjustment for surfactants / Humectancy
A4	Glycerin		Glycerin	22.00	Solubility adjustment for surfactants / Humectancy
B1	Amisoft MS-11(F)	Ajinomoto USA, Inc	Sodium Myristoyl Glutamate	15.00	Primary surfactant / Cleansing
B2	Amisoft CS-11(F)	Ajinomoto USA, Inc	Sodium Cocoyl Glutamate	3.00	Secondary surfactant / Cleansing
В3	Amisoft LS-11(F)	Ajinomoto USA, Inc	Sodium Lauroyl Glutamate	2.00	Secondary co-surfactant / Cleansing
C1	Plantaren 1200N	Cognis	Lauryl Glucoside	1.50	Tertiary surfactant, fragrance solubilization
C2	Clementine CO2 essential oil	Eden Botanicals	Clementine essential oil	0.50	Natural fragrance
D1	Stepan GCC	Stepan	Glyceryl Caprylate / Caprate	1.00	Fragrance solubilization
E1	Euxyl PE9010	Schülke & Mayr	Phenoxyethanol, Ethylhexyl Glycerin	1.00	Preservative

## Manufacturing Procedure

Combine phase A with mixing at room temperature until the gum is well hydrated, slowly add Phase B. Mix Phase C together, combine with Phase D, and add to the rest of the batch. Add Phase E, pH as is: 6.5. Viscosity: 2.464 mPa's @2orpm, spindle #3, 25°C, 10 sec.

(Prototype formula# ASC 18-36-1 provided by Ajinomoto USA, Inc., 400 Kelby Street, Fort Lee, New Jersey 07024. Tel: (201) 292-3180, Fax: (201) 346-5638)

For additional information

DuPont Tate & Lyle Bio Products Customer Service or samples, please contact: +1-866-404-7933 www.duponttateandlyle.com



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