

Sulfate-free Body Wash

The formulation that follows is for a sulfate-free body wash based on PolySaf 5600 cationic polymer. As formulated, this body wash provides these features:

- Excellent deodorancy
- Exceptional rinsability and clean feel
- Creamy, dense foam

As a formulation ingredient, PolySaf 5600 provides these benefits:

- Supplied as a formulation-ready liquid emulsion to reduce handling and pre-mixing requirements
- Formulating flexibility
- Non-irritating
- Supports development of foam in the presence of other ingredients

Demonstration Formulation (#1743004)

No.	Phase	Ingredient	INCI Name	% by Weight	Batch Size, g
1	A	Water	Water (Aqua)	35.52	355.17
2	A	Na ₂ EDTA	Disodium EDTA	0.05	0.50
3	A	Bio-terge AS 40	Sodium C14-16 Olefin Sulfonate	45.00	450.00
4	A	Glucamate Doe 120	PEG-120 Methyl-Glucose Dioleate	1.50	15.00
5	A	Zemea Propane Diol	Propanediol	2.00	20.00
6	A	PolySaf 5600	Butyl Acrylate/Ethyltrimonium Chloride Methacrylate/Styrene Copolymer	2.50	25.00
7	B	Monamid CMA	Cocamide MEA	1.50	15.00
8	B	Velvetex BK 35	Cocamidopropyl Betaine	10.00	100.00
9	C	Kathon CG	Methylisothiazolinone Cocamidopropyl Betaine	0.06	0.60
10	C	Mackpearl 140v	Glycol Distearate, Cocamidopropyl Betaine, Cocamide MEA and Sodium Lauryl ether Sulfate	1.50	15.00
11	D	Citric Acid	20% Soln to pH 6.0-6.5	0.17	1.73
12	D	Mardi Gras #55444	Fragrance (Belle Aire)	0.20	2.00
				100.0	1000.0

Manufacturing Instructions

- Phase A: Combine 2, 3 with water; heat with mixing to 75°C.
Slowly add remaining phase A ingredients with 6 being added last. Hold temperature at 75°C; mix slowly.
- Phase B: Combine phase B ingredients; heat to 75°C with slow mixing.
Add phase B to phase A; mix until uniform.
Cool batch to room temperature.
- Phase C: Add phase C ingredients one at a time.
- Phase D: Use phase D to adjust the pH of batch to 6.0-6.5.

Properties as Formulated

Property	Value
pH	6.6
Foaming Volume Test	780/10
Rubber Stopper Foam, seconds	25
Viscosity, cps (Brookfield #5, 20 rpm, 30 sec)	9,200

Learn More About PolySāf 5600 Polymer; Request a Sample

For product information or to request samples, contact Lisa Droste of Mallard Creek Polymers at 1-800-547-0622, ext. 1091 or visit www.polysaf-polymers.com.

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