

D-236

HEAVY-DUTY LIQUID DETERGENT

CONCENTRATED (3x) - WITHOUT SOLVENTS

GUIDELINE FORMULARY

DESCRIPTION

Heavy-duty Liquid Detergent for laundry machines
Concentrated product (3x)
Recommended dosage: 35mL product/wash
Without solvents

COMPOSITION

	%
LEVENOL® F-200	15.8
EMAL® 270D ⁽¹⁾	13.0
SULFONAX®	11.5
Coconut Fatty Acid	5.0
Sodium Citrate (Anhydrous)	5.0
Triethanolamine (TEA)	4.4
NaOH (50% solution)	Approx. 3.5
Sodium Citrate (Anhydrous)	2.6
Enzymes	q.s.
Chelating agents	q.s.
Optical brighteners	q.s.
KAO Fragrance	q.s.
Dye(s)	q.s.
Preservative	q.s.
Deionized Water	Up to 100

(1) 13.0% of EMAL® 270D (SLES at 70% a.m) can be replaced by 33.7% of EMAL® 227E (SLES at 27% a.m)

TECHNICAL CHARACTERISTICS

Kao Method

APPEARANCE (20°C):	Clear viscous liquid	KCSA-258
pH (as it is):	8.0 - 8.5	KCSA-014
VISCOSITY BROOKFIELD (20°C,cP):	200 - 600	KCSA-227
SURFACTANT ACTIVE CONTENT (%):	Approx. 45	KCSA-246
STABILITY TEST:	Correct	(1 month 40°C/RT/5°C)

RECOMMENDED OPERATIVE METHOD

Charge water at room temperature

Add the NaOH (50% solution) to the water and afterwards add SULFONAX® and Coconut Fatty Acid (previously melted).

Continue with the addition of Sodium Citrate (Anhydrous).

Check pH and adjust it between 7.0-8.0, if necessary with NaOH (50% solution).

Continue with the addition of LEVENOL® F-200 and EMAL® 270D, homogenizing the blend after the addition of each component.

Add the enzymes following supplier recommendations.

Continue with the addition of the other additives: chelating agents, preservative, opacifier, optical brighteners, perfume, keeping in mind supplier recommendations.

Final pH adjustment (8.0 - 8.5) with NaOH (50% solution).

Adjust weight with Deionized water to 100%.

Unload final product.

COMMENTS

Ensure that pH is between 7.0 and 8.0 before LEVENOL® F-200 addition.

In case of using enzymes, follow supplier recommendations regarding dosage, enzyme stabilizers and formulation procedure. Avoid the usage of Lipases.

COMPONENTS

EMAL® 270D (Sodium Laureth Sulfate, ≈ 70% a.m.): anionic character. Primary surfactant, highly foaming. Good detergent properties.

LEVENOL® F-200 (Glycereth-6 Cocoate, ≈ 100% a.m.): non-ionic character. Mild surfactant with detergent power performance similar or even better than standard non-ionic surfactants. Medium foaming and good hydrotropic & wetting properties that allow the reduction of solvents. Eco-toxicologically friendly. It doesn't need any risk sentences or warnings on its label.

SULFONAX® (Dodecyl Benzene Sulfonic acid, » 94% a.m.): anionic character. Primary surfactant, highly foaming. Good detergent properties.

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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