



ELSURFAC - LSA90™ (LABSA)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	Brown liquid; semi-solid or waxy at low temperatures
Physical Form	Liquid
Odor	Sulfurous
Density or Specific Gravity	0.992 g/mL at 25 °C
Viscosity	1260 cPs at 25°C
pH (if aqueous solution)	1 - 2 (1% aq. sol'n)
Molecular Weight (g/mol)	326.49
Chemical Properties	
Incompatibilities	Strong oxidizers, bases, and reactive metals.
Hazardous Reactions	Exothermic neutralization and release of toxic sulfur oxides on decomposition.
Thermal Properties	
Boiling Point	>100 °C
Flash Point	>150 - 210 °C [PMCC]

2. Processing Methods



Household and industrial detergent powder

When adding Linear Alkyl Benzene Sulphonic Acid (LABSA) to household or industrial detergent powder formulations, first neutralize it with soda ash (sodium carbonate) or caustic soda to form its sodium salt. Neutralization should be done in a separate vessel with controlled stirring to avoid splashing due to the exothermic reaction

Key Ingredients	Indicative Dosage (% w/w)
Soda Ash	5-12%
Caustic soda	13% of the LABSA added
Linear Alkyl Benzene Sulphonic Acid	5-28%
Sodium silicate	~11%
CMC	~1%
Enzyme, Perfume, Optical Brightner	

Cleansers

Always add LABSA to water, not the other way around, to prevent excessive heat buildup and splashing. Pre-mixing with water before neutralization helps reduce viscosity spikes and ensures smoother emulsification.

Key Ingredients	Indicative Dosage (% w/w)
Linear Alkyl Benzene Sulphonic Acid (LABSA)	5-28%
Sodium carbonate/silicate	6-12%
Sodium sulfate	10-20%
Water	20-50
Other surfactants (e.g., SLES, AOS)	2-10%
Additives (enzymes, fragrances, colorants)	

Soap

Add the neutralized LABSA to the soap base during the mixing phase to enhance cleansing and foaming properties. Ensure proper pH adjustment (around 9-10 for bar soaps) to maintain product stability and user safety. Avoid direct addition of unneutralized LABSA to prevent irritation and formulation instability.

Key Ingredients	Indicative Dosage (% w/w)
Soap base (soap noodles)	35-50%
LABSA	5-10%
Amine oxide	1-4%
Other additives (color, fragrance, fillers)	



Laundry Detergent Liquid

Neutralize LABSA (typically 90%) with caustic soda (NaOH) to form the sodium salt (SLES/LAS) before adding to the formulation. Maintain pH between 7-9 to ensure fabric safety and formulation stability. Add LABSA slowly with stirring to avoid excessive foaming and ensure homogeneous mixing.

Key Ingredients	Indicative Dosage (% w/w)
SLES	9-10%
LABSA (96%)	3-6.2%
Caustic soda	0.2-0.83%
CDEA (70%)	1-2%
AEO-9	1-4%
EDTA-2Na	0.2-0.5%
Fragrance, Dye, Preservatives, Deionized water, Salt (NaCl)	

3. Dosing by Application

Products	Authorized dosage
Household and industrial detergent	5-25%
Personal Care Products	5-15%
Textile	8-15%

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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