

FORMULATION

# Value Liquid Laundry Detergent

#### **Overview**

- · Value-driven liquid laundry detergent with excellent soil and stain removal
- · Effective in hard and cold water conditions
- · Keeps whites white and colors bright
- · Biodegradable, free from environmentally persistent ingredients such as polyacrylates, and free from phosphates

### Composition

Ingredient	Trade Name	Function	% w/w
Water			QS to 100
Sodium Hydroxide (50%)		Neutralizing Agent	1.25
Linear Alkyl Benzene Sulfonic Acid	Bio-Soft S-101 (Stepan)	Biodegradable Anionic Surfactant	5
Sodium Oleate		Biodegradable Anti-Foamer	0.75
Sodium Citrate		Biodegradable Chelant	2.5
Sodium Polyaspartate (40% active)	Soltellus 2101L (Lygos)	Biodegradable multi-functional polymer  Anti-redeposition agent for brighter colors and whiter whites  Anionic surfactant and enzyme booster	1.5 - 2.5
Sodium Laureth Sulfate (60% active)	Steol CS-460 (Stepan)	Biodegradable Anionic Surfactant	2
Laureth-6 (100% active)	Eco Brij L6 (Croda)	Biodegradable Nonionic Surfactant	4
Glycerin		Biodegradable Co-Solvent	2.5
Sodium Hydroxide or Citric Acid		pH Adjuster	As needed
Sodium Chloride		Viscosity Modifier	As needed
Protease	Liquinase Evity 3.5 L (Novonesis)	Facilitates the Breakdown of Protein Stains	0.5
Amylase	Amplify Prime 100 L (Novonesis)	Facilitates the Breakdown of Starch Stains	0.25
CaCl2 Dihydrate		Enzyme Stabilizer	0.02
Methylisolhiazolinone/ Benzisothiazolinone	Acticide MBS (Thor)	Biodegradable Preservative	0.15
Fragrance/Dyes	Adjuvants	Product Aesthetics	

#### **Directions**

- 1. Mix Water and NaOH, then slowly add BIO-SOFT S-101 with uniform mixing
- 2. Add sufactants, chelants, anti-foamers, co-solvents, and Soltellus 2101L while mixing
- 3. Add pH adjuster and viscosity modifiers to reach pH 7.5 to 8.5 and desired viscosity
- 4. If using heated process, let system cool to ambient temperature prior to adding enzymes, stabilizer, preservatives, and adjuvants

Formula Data Sheet: Laundry
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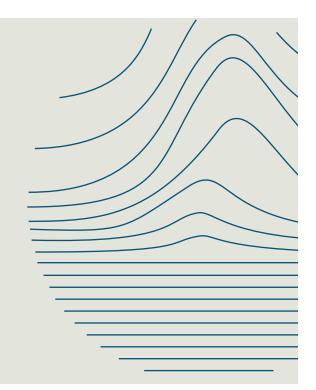
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## **Potential Claims**

- · Keeps whites white and colors bright
- Excellent for cleaning in hard water
- Save money and the environment using cold water
- Safe for sensitive skin
- Free from harmful ingredients
- Free-from polyacrylates and phosphates
- Biodegradable
- Safe for septic tanks

# **Product Properties**

Parameter	Value	
Appearance	Colorless to lightly colored formulation	
pH (as is)	7.5-8.5	
Compatability	Limited compatability with cationic ingredients	



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