

Barentz.



HI&I

Eco-Friendly Ingredients



Natural, Sustainably Sourced and Environmentally Preferred Ingredient Solutions.

At Barentz, we believe we have a responsibility to our planet. We actively support our customers in formulating safer, more effective products that add value to their businesses and the earth.

Barentz offers natural, sustainably sourced raw materials that help customers reduce their carbon footprint. These products can be used in the formulation of laundry detergents, hard-surface cleaners, dish wash, air care products, as well as a wide range of other products. Barentz is here to help navigate the ever changing regulatory landscape surrounding the chemical industry.

Barentz' sustainable solutions allow formulators to develop products with reduced levels or are free of:

- 1,4-dioxane
- Ammonia
- Chlorine
- DEA
- EDTA
- Formaldehyde
- Glycol ethers
- NTA
- Petroleum derivatives
- Phosphates
- Parabens
- Synthetic dyes or fragrances



Barentz' range of sustainable solutions allows customers to comply with various eco-friendly certification programs to meet environmental and safety standards.

Barentz.



Your Guide to Sustainable Solutions.

Bio-Based Specialty Solvents

D-LIMONENE

Citrus Terpene

Naturally derived solvent derived from fresh citrus for use in a wide variety of applications and pH ranges.

Features include: enhanced solvency, effective degreasing & cleaning performance on hard surfaces, 100% bio-based, Prop 65 compliant

ZEMEA®

1,3-propanediol

100% bio-based, natural, skin-friendly alternative to petroleum-based glycols for liquid laundry detergents, liquid hand cleaners, automatic dish detergents, carpet & rug cleaners, hard surface cleaners & glass cleaners. Zemea® functions well as an enzyme stabilizer or solvent.

Features include: high purity, favorable environmental profile, enhanced clarity, lack of skin irritation, good stability, USDA Bio-preferred, CleanGredients listed, Prop 65 Compliant

SOY METHYL ESTER

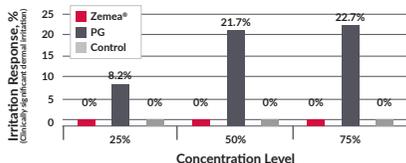
Methyl Ester

100% bio-based methyl ester, naturally derived from soy beans. Soy Methyl Ester has a variety of benefits and uses in the household care, industrial and institutional cleaning market.

Features include: biodegradable, non-reactive, non-toxic, non-flammable

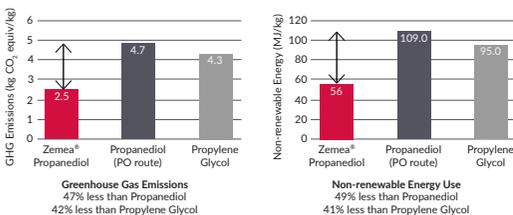
Zemea® - Non-irritating to skin:

Human skin patch test results



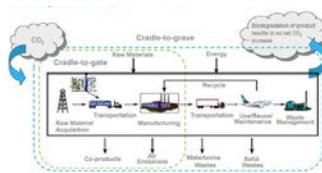
Life Cycle Analysis Approach

LCA is the only standardized method to evaluate the environmental footprint of a whole supply chain. Energy consumption & Green House Gas (CO₂) emissions are key factors in determining environmental footprint.



Zemea® Propanediol Life Cycle Analysis

From cradle-to-gate, Zemea® propanediol produces 56% less greenhouse gas emissions & consumes 42% less nonrenewable energy than petroleum-based 1,3-propanediol. Compared with PG, Zemea® propanediol produces 42% less greenhouse gas emissions and uses 38% less nonrenewable energy from cradle-to-gate.



Enzymes

LAVERGY® C BRIGHT 100 L

Cellulase

Protease with excellent boron-free stabilization technology. Lavergy® C Bright 100L has high stability and wash performance.

Features include: readily biodegradable, favorable environmental profile, allows for cold wash temperatures, superior stability, preservative & 1,4-dioxane-free, **CleanGredients listed**

LAVERGY® PRO 106 L

Non-stabilized Protease

Presents a high plateau of performance over the dose-response curve compared to other leading proteases leading to better stain removal and reduction in re-wash, even at lower temperatures.

Features include: readily biodegradable, favorable environmental profile, allows for cold wash temperatures, 1,4-dioxane free. **CleanGredients listed**

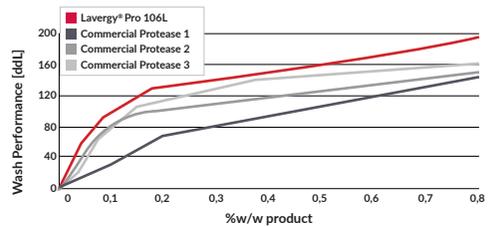
LAVERGY® PRO 114 LS

Stabilized Protease

Protease with excellent boron-free stabilization technology. Lavergy® Pro 114LS has high stability and wash-performance.

Features include: readily biodegradable, favorable environmental profile, allows for cold wash temperatures, superior stability, preservative & 1,4-dioxane-free, **CleanGredients listed**

SUPERIOR PERFORMANCE @ 20°C



Test method: Miele Novotronic W1614 WPS; standard cotton program at 20°C and 30°C; 15L; 3,5kg ballast load; WEU liquid laundry detergent; 50g with Lavergy® Pro 106 L and market relevant proteases. Multi-stain monitors with 13 protease relevant stains; CIELab*

- BASF liquid protease Lavergy® Pro 106 L has superior efficacy at 20 °C and 30 °C
- Highest performance plateau of market-relevant detergent proteases
- Differentiating performance on egg,blood, and milk stains

ENVIRONMENTAL COMPATIBILITY

Product	Biodegradability	Fish Toxicity (acute)*
Lavergy® C Bright 100 L	Readily Biodegradable (OECD)	8.2 mg/L
Lavergy® Pro 106 L	Readily Biodegradable (OECD)	8.2 mg/L
Lavergy® Pro 114 LS	Readily Biodegradable (OECD)	There is a high probability the product is not acutely harmful to aquatic organisms

* (LC 50 96h Oncorhynchus mykiss)



Surfactants

CALFOAM® SLS-95

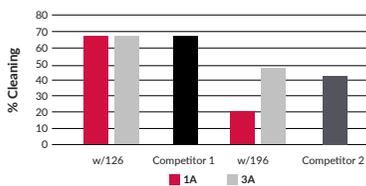
Sodium Lauryl Sulfate

Naturally derived, vegetable based 95% active sodium lauryl sulfate in granular form. Calfoam® SLS-95 produces copious foam and a rich lather. Excellent soil removal for dish wash, car wash, laundry, carpet shampoo, hard surface cleaners

Features include: readily biodegradable, outstanding flash foamer, excellent detergency & soil removal properties, derived from renewable vegetable resources

All-Purpose Cleaner with CalNEXT™ 126 & 196 Bio-Surfactant:

A6 Soil Removal Testing



FLEXICLEAN™ AMP-FB

Bio-Based Surfactant

Bio-based, high foaming amphoteric detergent for use in cleaning products. Flexiclean™ AMP-FB can be combined with Flexipel™ SR-80 for vehicle care formulations to provide foaming, cleaning, and hydrophilic barrier.

Features include: readily biodegradable, provides solubilizing & emulsification properties, compatibilizes surfactants in high electrolyte formulations, high foam

CALNEXT™ 126 & 196 BIO-SURFACTANT

Proprietary Bio-Based Surfactant

Bio-based, proprietary, patent-pending surfactant derived from renewable, biomass feedstock produced via sustainable production methods. The surfactant of choice for a wide variety of household, industrial & institutional (HI&I) applications.

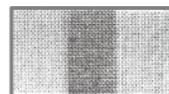
Features include: 35% active, superior cleaning & soil removal properties, excelling wetting & foaming, highly water soluble, great detergency, exceeds low 1,4-dioxane requirements

Ingredient	1A-wt%	3AWt%
Water	to 100	to 100
CalNEXT™ Surfactant (Active)	1.0	1.0
Sodium Carbonate	0.5	0.5
d-Limonene	0.2	0.2
NxtSolv100	3.0	--
MCI/MI	0.1	0.1



1A-126

A6 Soil
Removal
Test Method



3A-196

RHODAPEX® ESB 70 NAT

Sodium Lauryl Ether Sulphate

Versatile raw material sourced from plants and produced entirely with renewable carbon.

Features include: boosts cleansing & purifying, presents a low carbon footprint, promotes foaming

RHODASURF® 6 NAT MB

Ethoxylated C12-14 Alcohols

Biodegradable Linear Alcohol Ethoxylate, naturally sourced for use in variety of home care applications.

Features include: readily biodegradable, high foaming



Surfactants

FLEXISURF™ LDP

Sodium Lauriminodipropionate

Naturally derived, amphoteric surfactant that compatibilizes nonionic surfactants in high electrolyte and high alkaline formulations while contributing detergency and foaming in hard or soft water.

Features include: readily biodegradable, contributes wetting, cleaning & solubilizing benefits, exceptional foaming regardless of water hardness

RHODASURF® 91-6

Ethoxylated C9-11 Alcohols

Biodegradable Linear Alcohol Ethoxylate is primarily an emulsifier, detergent and wetting agent. For use in household cleaners, laundry products, vehicle wash, floor cleaners, wax strippers, industrial cleaners and more.

Features include: readily biodegradable, excellent wetting, emulsification & detergency

ENVIRONMENTAL COMPATIBILITY

Product	Biodegradability	Fish Toxicity (acute)*
Calfoam® SLS-95	Readily Biodegradable	1.36 mg/L; 29 mg/L
CalNEXT™ 126 Bio-surfactant	Ask for details	Ask for details
CalNEXT™ 196 Bio-surfactant	Ask for details	Ask for details
Flexiclean™ AMP-FB	Readily Biodegradable (OECD)	4.2 mg a.i./g A ₁₀ - <100
Flexisurf™ LDP	Readily Biodegradable (OECD)	4.2 mg a.i./L
Rhodapex® ESB 70 NAT	Readily Biodegradable	1 ~ 10 mg/L
Rhodasurf® 91-6	Readily Biodegradable 76% (OECD)	1 ~ 10 mg/L

* (LC 50 96h fish per protocol)



Environmentally Preferred Product Offerings

Product Name	Chemical Description	Eco-friendly Features	Applications			
			Carpet	Hand Dish	Hard Surface	Laundry

Enzymes

Lavery® C Bright 100 L	Cellulase	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats (lowers energy costs)				✓
Lavery® Pro 106 L	Protease	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats (lowers energy costs)		✓		✓
Lavery® Pro 114 LS	Protease	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats (lowers energy costs)		✓		✓

Odor Absorbers

Flexisorb™ OD-120ZnR	Zinc ricinoleate	Naturally sourced from castor seed oil 63% bio-based Biodegradable Chelate-free Applicable for low water & concentrated formats	✓		✓	✓
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Polymers

Rheozan® BLC	Biological liquid cellulase	Listed on the EPA's Safer Chemical Ingredients List (SCIL) 100% bio-based Fermentation manufacturing process Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓
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Preservatives

TroyGuard™ CM1.5 CF	Chloromethylisothiazolinone (CMIT) Methylisothiazolinone (MIT)	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Applicable for low water & concentrated formats	✓	✓	✓	✓
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Probiotics

J-Zyme® Multi Spore 10BD SB	Blend of Bacillus spores	Microorganism is non-pathogenic, classified to BioSafety Level 1 Free of EDTA, 1,4-dioxane, and Prop 65 chemicals	✓		✓	
J-Zyme® Multi Spore Carpet Spot 5X FF	Blend of Bacillus spores	Microorganism is non-pathogenic, classified to BioSafety Level 1 Free of EDTA, 1,4-dioxane, and Prop 65 chemicals	✓		✓	
J-Zyme® Multi Spore Concentrate 20X NF	Blend of Bacillus spores	Microorganism is non-pathogenic, classified to BioSafety Level 1 Free of EDTA, 1,4-dioxane, and Prop 65 chemicals	✓		✓	
J-Zyme® Multi Spore Odor Controller 10X FF	Blend of Bacillus spores	Microorganism is non-pathogenic, classified to BioSafety Level 1. Free of EDTA, 1,4-dioxane, and Prop 65 chemicals	✓		✓	

Silicones

ECO DMS-300 Silicone Fluid	Polydimethylsiloxane	As a defoamer, listed on the EPA's Safer Chemical Ingredients List (SCIL) Greener fluid Manufactured in the only silicone recycling plant in the USA Applicable for low water & concentrated formats	✓		✓	✓
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Environmentally Preferred Product Offerings

Product Name	Chemical Description	Eco-friendly Features	Applications			
			Carpet	Hand Dish	Hard Surface	Laundry

Solvents

D-Limonene	Orange terpenes	Listed on the EPA's Safer Chemical Ingredients List (SCIL) Source: Citrus 100 % bio-based Free of 1,4-dioxane and Prop 65 chemicals			✓	✓
Soy Methyl Ester	Methyl ester	100 % bio-based Source: Soy beans Biodegradable Non-toxic			✓	
Zemea®	1,3-propanediol	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Source: Corn sugar 100% bio-based Fermentation manufacturing process Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓

Surfactants - Amphoteric

Flexiclean™ AMP-FB	Sodium lauriminodipropionate, alkylpolyglucoside	Contains at least 83% biorenewable carbon Biodegradable Applicable for low water & concentrated formats Meets 1,4-dioxane requirements	✓	✓	✓	✓
Flexisurf™ LDP	Sodium lauriminodipropionate	Source: Coconut oil Contains at least 67% biorenewable carbon Biodegradable Applicable for low water & concentrated formats Meets 1,4-dioxane requirements	✓	✓	✓	✓
Spectrum LO	Lauramine oxide	Listed on the EPA's Safer Chemical Ingredients List (SCIL) Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓

Surfactants - Anionic

Calfoam® SLS-95	Sodium lauryl sulfate	Listed on the EPA's Safer Chemical Ingredients List (SCIL) Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓
Calsoft® L-40 & L-60	Sodium linear alkylbenzene sulfonate	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓
Calsoft® LAS-99	Linear alkylbenzene sulfonic acid	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Biodegradable Applicable for low water & concentrated formats	✓	✓	✓	✓
Flexisurf™ COS-37	Potassium cocoate	Derived from all natural feedstock Source: coconut oil Contains 100% biorenewable carbon Readily biodegradable Low aquatic toxicity Meets 1,4-dioxane requirements			✓	
Flexisurf™ SS-40E	Disodium laureth sulfosuccinate	Bio-based Contains at least 55% biorenewable carbon Biodegradable Sulfate free	✓	✓		
Rhodapex® ESB 70 NAT	Sodium lauryl ether sulfate	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Bio-based (ask for details) Biodegradable Applicable for low water & concentrated formats		✓		✓

Environmentally Preferred Product Offerings

Product Name	Chemical Description	Eco-friendly Features	Applications			
			Carpet	Hand Dish	Hard Surface	Laundry

Surfactants - Nonionic

CalNext™ 126 Bio-Surfactant	Proprietary bio-based surfactant	Derived from renewable, biomass feedstock and is produced via sustainable production methods Renewable Carbon Index (RCI) ask for details Biodegradable Meets 1,4-dioxane requirement	✓	✓	✓	✓
CalNext™ 196 Bio-Surfactant	Proprietary bio-based surfactant	Derived from renewable, biomass feedstock and is produced via sustainable production methods Renewable Carbon Index (RCI) ask for details Biodegradable Meets 1,4-dioxane requirement	✓	✓	✓	✓
Flexisurf™ DDO-30	Dodecyl dimethylamine oxide	Source: coconut Contains at least 85% biorenewable carbon Non-GMO status FIFRA inert ingredient in non-food pesticides Applicable for low water & concentrated formats Meets 1,4-dioxane requirements	✓	✓	✓	✓
Flexisurf™ LO-30	Lauryl dimethylamine oxide	Listed on the EPA's Safer Chemical Ingredients List (SCIL) Derived exclusively from all natural feedstock Source: Coconut Contains at least 85% biorenewable carbon Applicable for low water & concentrated formats Meets 1,4-dioxane requirements	✓	✓	✓	✓
Flexisurf™ MCO-30	Myristyl/Cetyl dimethylamine oxide	Derived exclusively from all natural feedstock Source: Coconut Contains at least 88% biorenewable carbon Applicable for low water & concentrated formats Meets 1,4-dioxane requirements	✓	✓	✓	✓
Rhodasurf® 6 NAT MB	Linear alcohol ethoxylate	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients 100% Naturally Derived Fermentation manufacturing process Biodegradable Applicable for low water & concentrated formats	✓		✓	✓
Rhodasurf® 91-8	Ethoxylated C9-11 alcohols	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Biodegradable Applicable for low water & concentrated formats	✓		✓	✓
Rhodasurf® 91-6	Ethoxylated alcohols	Listed on the EPA's Safer Chemical Ingredients List (SCIL) and CleanGredients Biodegradable Applicable for low water & concentrated formats	✓		✓	✓
Spectrum APG 810	Alkyl polyglucoside	Bio-based Biodegradable Applicable for low water & concentrated formats	✓		✓	✓

barentz-na.com Always a better solution.

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