



Formulation

Name	1-to-20 GREEN BIO-BASED DILUTABLE GLASS AND WINDOW CLEANER CONCENTRATE	
No.	1293	
Description	This environment-friendly glass cleaner concentrate has it all! Not only is the ALPHA-STEP® PC-48 CleanGredients® listed and the solvent and builder are listed on the U.S. EPA's Safer Chemical Ingredient List (SCIL), making it suitable for Safer Choice certification, based on the surfactant only, this formulation contains 94% bio-renewable carbon. Being a concentrate, less water is shipped from manufacturer to retailer to the consumer – offering an improved carbon footprint and freight savings compared to ready-to-use glass cleaners. Green Your Clean using Stepan ingredients!	
Formulation	INGREDIENTS:	<u>% by Weight</u> <u>Functionality</u>
	Deionized Water	73.45 Diluent
	ALPHA-STEP® PC-48	5.50 Cleansing Agent
	Bio-based Ethanol	21.00 Solvent
	Sodium Bicarbonate	0.05 pH Regulator
	Preservative, Fragrance, and Dye	q.s. Additives
	Total	100.00
Procedure	<ol style="list-style-type: none"> 1. Charge Deionized Water. 2. With good agitation, add ALPHA-STEP® PC-48. 3. Adjust pH to neutral with Sodium Bicarbonate. 4. Add Ethanol. 5. If desired, add Fragrance and/or Dye. 6. Lastly, add Preservative and mix until mixture is homogeneous. 	
Physical Properties	Appearance at 25°C	Clear liquid
	pH, as is	6-8
	Viscosity at 25°C, cps	Water thin
	% VOC, as is	21
	% VOC at 1:20 dilution	1
	Flash Point, °F, PMCC	98.6
Storage/Stability	Freeze/Thaw, 3 cycles	Pass
	4 weeks at 50°C	Stable
	4 weeks at 25°C	Stable
	4 weeks at 4°C	Stable
Instructions for Use	Dilute 1 part concentrate with 20 parts water. Dispense with pump sprayer and wipe glass or window surface clean with paper towel or cloth.	
External Comment	Marketing Notes: : “Environment-friendly” and “Green” refer to the use of ingredients that are considered favorable by the U.S. EPA Safer Choice standard (https://www.epa.gov/saferchoice/safer-choice-standard). U.S. EPA's Safer Chemical Ingredient List (SCIL) can be found at https://www.epa.gov/saferchoice/safer-ingredients . At use level, this	

formulation meets U.S. Federal and all State Volatile Organic Compounds (VOC) standards for Non-aerosol Glass Cleaners of January 2019 (excluding additives). Bio-based refers to ingredients originating from biorenewable sources. Biorenewable is defined by Stepan as originating from animal, plant, or marine materials. ALPHA-STEP® PC-48 contains a Biorenewable Carbon Index (BCI) of 94. For further information on Stepan's BCI, visit www.stepan.com. The manufacturer is responsible for the use of other "Green" and "Bio-based" ingredients, as defined herein, including but not limited to Preservative, Fragrance, and Dye. Use of the term "Green", "Bio-based", or "Biorenewable" on the finished product or label is at the sole risk of the finished product manufacturer, for which Stepan bears no responsibility. Label and/or trademark usage of the final product is the sole responsibility of the finished product manufacturer.

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Assistance

For applications or product handling assistance, call our Technical Service Department at 1-800-745-7837 (U.S.) or 011-334-76-505-100 (Europe).
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