



Formulation

Name	1-TO-9 DILUTABLE FAST-WETTING GLASS AND WINDOW CLEANER CONCENTRATE	
No.	1110	
Description	This environment-friendly concentrate may be suitable for Safer Choice certification, containing Stepan surfactants that are approved on www.cleangredients.org (BIO-SOFT® N1-7 and BIO-TERGE® PAS-8S) and a solvent that is listed on the U.S. EPA's Safer Chemical Ingredient List (SCIL). The nonionic surfactant used, BIO-SOFT® N1-7, allows the cleaner to wet and spread over surfaces quickly and efficiently, while the specialty anionic surfactant, BIO-TERGE® PAS-8S, improves the final appearance with reduced filming and streaking on glass. See Stepan Company's Formulation # 1092 for a ready-to-use version of this Formulation. Green Your Clean using Stepan ingredients!	
Formulation	<u>INGREDIENTS:</u>	<u>% by Weight</u> <u>Functionality</u>
	=== Phase 1 === Deionized Water BIO-TERGE® PAS-8S	71.2 Diluent 18.0 Hydrotrope, Cleansing Agent
	=== Phase 2 === BIO-SOFT® N1-7	1.8 Wetting Agent, Cleansing Agent
	=== Phase 3 === Isopropanol	9.0 Solvent
	=== Phase 4 === Fragrance, Preservative, and Dye	q.s. Additives
	Total	100.0
Procedure	<ol style="list-style-type: none"> 1. Charge Deionized Water and BIO-TERGE® PAS-8S. 2. With good agitation, slowly blend in BIO-SOFT® N1-7. 3. Once clear, add Isopropanol. 4. Add Fragrance, Preservative and Dye. 5. Mix until homogenous. 	
Physical Properties	Appearance at 25°C pH, as is Viscosity at 25°C % VOC, as is (calculated) % VOC at 1 to 9 dilution (calculated) Flash Point, °F, PMCC	Clear liquid 5 Water thin 9.9 <1 115
Storage/ Stability	Freeze thaw, 3 cycles 1 month at 50°C 1 month at 25°C 1 month at 5°C	Pass Stable Stable Stable

Instructions
for Use

Dilute 1 part concentrate with 9 parts water. Spray on mirror or glass surface and wipe clean with paper towel or cloth.

Stepan Method SM 250-A, 'Hard Surface Cleaner Filming/Streaking Evaluation'; Results" 9.5 out of 10. Performance is comparable to market leader.

External
Comment

Marketing Notes: At use dilution, 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-TERGE® PAS-8S is an approved ingredient on www.cleangredients.org. It also does not contain nonylphenol ethoxylates (NPEs). "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>. Label and/or trademark usage of the final product is the sole responsibility of the finished product manufacturer, for which Stepan bears no responsibility.

Registered
Trademarks
of Stepan
Company

BIO-TERGE®
BIO-SOFT®

For
Additional
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).
For ordering assistance, call our Account Service Department at 1-800-457-7673.

The information contained herein is based on the manufacturer's own study and the works of others and is subject to change without prior notice. The information is not intended to be all-inclusive, including as to the manner and conditions of use, handling, storage or disposal or other factors that may involve additional legal, environmental, safety or performance considerations. Nothing contained herein grants or extends a license, express or implied, in connection with any patents issued or pending of the manufacturer or others, or shall be construed as a recommendation to infringe any patents. **STEPAN COMPANY MAKES NO PRODUCT WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, EXPRESS OR IMPLIED, AND NO OTHER WARRANTY OR GUARANTY, EXPRESS OR IMPLIED, IS MADE, INCLUDING AS TO INFORMATION REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, OR ADEQUACY.** Stepan Company (and its employees, subsidiaries and affiliates) shall not be liable (regardless of fault) to the vendee, its employees, or any other party for any direct, indirect, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy, furnishing, use, or reliance upon information provided herein. The vendee assumes and releases Stepan Company (and its employees, subsidiaries and affiliates) from all liability, whether in tort, contract or otherwise to the fullest extent possible under the relevant law.

Stepan 

Stepan Company
Northfield, Illinois 60093
Telephone (847) 446-7500

Revision Date: 03/25/2019 Publication Date: 09/01/2009 © 2019, Stepan Company. All rights reserved.