



Formulation

Name	LOW FILM / STREAK GLASS CLEANER CONCENTRATE WITH BIO-SOFT® LFS-04	
No.	1372	
Description	This highly concentrated formulation is hard water tolerant up to 400ppm, and designed with Stepan's low film/streak technology. This formulation eliminates the need for flammable organic solvents to avoid flammable or hazardous storage requirements. The concentrate can be diluted 1:128. Use on windows, mirrors and glass display cases.	
Formulation	INGREDIENTS:	% by Weight Functionality
	Deionized Water	65.0 Diluent
	BIO-SOFT® LFS-04	13.0 Surfactant Blend
	BIO-TERGE® AS-40 HP	13.0 Surfactant
	Versene™ Powder Chelating Agent (Dow Chemical)	9.0 Chelating Agent
	Tetrasodium EDTA, 85%	q.s. Additives
	Preservative, Fragrance, Dye	
	Total	100.0
Procedure	<ol style="list-style-type: none"> 1. Charge Deionized Water. 2. Add Versene™ Powder Chelating Agent. Mix until dissolved. 3. Add BIO-SOFT® LFS-04 with mixing. 4. Add BIO-TERGE® AS-40 HP. 5. Mix until homogeneous. 6. Add preservative, fragrance, and dye as desired. 7. Mix until homogeneous. 	
Physical Properties	Appearance at 25°C	Clear liquid
	pH, as is	11.0 - 11.5
	pH, diluted 1:128	10.5 - 11.0
	Viscosity at 20°C (150 rpm, spindle 2), cps	132 (150 rpm, Spindle 2)
	VOC, as is (calculated), %	0
	Flash Point (PMCC), °C (°F)	>93 (>200)
Storage/Stability	4 weeks at 50°C	Stable
	4 weeks at 25°C	Stable
	4 weeks at 4°C	Stable
	Freeze/Thaw, 3 cycles	Pass
Instructions for Use	<p>For glass cleaning, dilute the formulation 1:128. Deionized water or up to 400ppm hard water may be used. Spray onto surface. Can be used with or without a squeegee. Wipe dry. Diluted cleaner should be used when made and not stored for later use.</p> <p>This formulation, when diluted 1:128 in 400ppm hard water outperforms a market ready-to-use glass cleaner on mirror by visual evaluation.</p>	
External Comment	Marketing Notes: Stepan's low film/streak nonionic technology helps this formulation to provide	

very good low film/streak on glass surfaces without rinsing or need for volatile organic solvents. Formulation is compliant with all U.S. Federal and State VOC standards for glass cleaners as of July 2019, both at any dilution and at the specified 1:128 dilution.

Registered
Trademarks
of Stepan
Company

BIO-SOFT®
BIO-TERGE®

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

Revision Date: 06/02/2021 Publication Date: 06/24/2021 © 2021, Stepan Company. All rights reserved.