



# Formulation

Name	<b>INDUSTRIAL METAL CLEANER</b>	
No.	1221	
Description	Even when diluted with water, this concentrate cleans various types of greases, such as lithium complex and molybdenum disulfide, from stainless steel.	
Formulation	<b>INGREDIENTS:</b>	<b><u>% by Weight</u>    <u>Functionality</u></b>
	BIO-SOFT® N91-6	50.0 Emulsifier
	STEPOSOL® MET-10U	25.0 Surfactant/Solvent
	Monoethanolamine (Dow)	25.0 Buffer
	<b>Total</b>	<b>100.0</b>
Procedure	<ol style="list-style-type: none"> <li>1. Charge BIO-SOFT® N91-6 in mixing vessel.</li> <li>2. Blend in STEPOSOL® MET-10U.</li> <li>3. Add Monoethanolamine.</li> <li>4. Mix until homogenous.</li> </ol>	
Physical Properties	Appearance at 25°C	Clear liquid
	pH, diluted 1:4	11.5 – 11.8
	Viscosity (as is) at 25°C, cps	<100
	VOC, concentrate (calculated), %	25.0
	VOC, diluted 1:4 (calculated), %	5.0
Storage/Stability	Freeze/thaw, 3 cycles	Pass
	1 month at 50°C	Pass
	1 month at 25°C	Pass
	1 month at 4°C	Pass
Instructions for Use	For the removal of tough grease adherence, apply to surface as is. Allow to penetrate 30 minutes. Wipe, scrape or brush off. Rinse if desired. For general grease removal, dilute 1:2 – 1:4. Apply to surface. Allow to penetrate 15 minutes. Wipe, scrape or brush off. Rinse. Diluted formulations will have cloud points <50°C, which can be raised with a standard hydrotrope such as STEPANATE® SXS, if desired.	
External Comment	<p>Marketing Notes: Please refer to the Safety Data Sheet for global regulatory information. It is the responsibility of the end user to review the chemical control regulations for each country. BIO-SOFT® N91-6 is an approved ingredient on <a href="http://www.cleangredients.org">www.cleangredients.org</a>. For further information, visit <a href="http://www.cleangredients.org">www.cleangredients.org</a>. This formulation does not meet the California Air Resource Board (CARB) VOC regulation for Consumer Products. "Consumer" is defined by CARB as any person who seeks, purchases, or acquires any consumer product for personal, family, household, or institutional use. For U.S. formulators, STEPOSOL® MET-10U is a low vapor pressure VOC (LVP-VOC), therefore its contribution to the VOC calculation is zero. STEPOSOL® MET-10U does not contribute to the VOC calculation because of its high boiling point and low vapor pressure. STEPOSOL® MET-10U and its formulations clean grease by a different mechanism than traditional solvents. Rather than dissolving these soils into a smeary gel that has to be removed by a second step with soap and water, Stepan's formulation breaks down these soils for easy removal</p>	

in one step. Also, unlike traditional solvents that quickly evaporate, Stepan's formulation remains on the surface and continues to work. Used this way, Stepan's formulation equals the removal performance of the leading solvent-based cleaners, and does it in one easy step that requires less work. Before using on plastic, hard or painted surfaces, spot test on an inconspicuous area first.

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BIO-SOFT®  
STEPOSOL®

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.

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