

## Product Bulletin

Product Name	<b>MAKON® NF-180</b>
Applications	MAKON NF-180 is a nonionic surfactant designed for low-foaming and defoaming applications. Its primary use is for rinse aids and ware-wash formulations, but it can also be used functionally as a dispersant and wetting agent. It is soluble in ethanol, isopropanol, methanol, toluene, xylene, and perchloroethylene solvents.
Typical Properties	<p>Appearance at 25 °C ..... Clear Liquid</p> <p>pH, 1% Aqueous ..... 5-7</p> <p>Actives, % ..... 100</p> <p>Water, % ..... 0.5 max.</p> <p>Color, APHA ..... 60 max.</p> <p>Hydroxyl Value, mg KOH/g ..... 37</p> <p>Cloud Point, 1% Aqueous °C (°F) ..... 18.5 (65.3)</p> <p>Cloud Point, 5 g in 25 g Butyl Carbitol 25% °C (°F) ..... 34.6 (94.3)</p> <p>Pour Point, °C (°F) ..... -7.1 (19.2)</p> <p>Flash Point, °C (°F) ..... &gt; 94 (&gt; 201)</p> <p>Viscosity at 25 °C (77 °F) / 38 °C (100 °F), cps ..... 263 / 141</p> <p>Density at 25 °C (77 °F), g/mL (lb/U.S. gal) ..... 1.02 (8.51)</p> <p>Density at 38 °C (100 °F), g/mL (lb/U.S. gal) ..... 1.01 (8.43)</p> <p>Surface Tension, 0.1% Aqueous, dynes/cm ..... 32.6</p> <p>Interfacial Tension with Light Mineral Oil, 0.1% Aqueous, dynes/cm ..... 3.4</p> <p>Draves Wetting at 25 °C (77 °F), 0.1% Aqueous, sec ..... 9.6</p> <p>Foam Height, Ross-Miles at 25 °C (77 °F), 0.1% Aqueous, Initial / 5 min, mm ..... 31 / 0</p> <p>Foam Height, Ross-Miles at 50 °C (122 °F), 0.1% Aqueous, Initial / 5 min, mm ..... 0 / 0</p> <p>Foam Height, Blender at 25 °C (77 °F), 0.1% Aqueous, Initial / 5 min, mm ..... 0 / 0</p> <p>Solubility in Water at 25 °C (77 °F) ..... Soluble &gt; 11 wt%</p> <p>RVOC, U.S. EPA, % ..... 0</p> <p>Preservative ..... None required</p>
Environmental Effects	Publically available data shows this type of chemistry to be inherently biodegradable.
Storage & Handling	<p><u>Standard Packaging:</u> MAKON NF-180 is available in drums, totes, and bulk quantities.</p> <p><u>Non-Bulk Storage Recommendations:</u> MAKON NF-180 should be stored in closed containers and kept in a cool, dry place away from incompatible materials (see Section 10 of the SDS). If material is frozen, it may be fluidized by warming with a drum heater or in a steam room. Drums should be vented prior to heating to avoid excessive pressure build up.</p> <p><u>Bulk Storage Recommendations:</u> MAKON NF-180 should be stored in vessels of 316 stainless steel, but carbon steel is also adequate with effective moisture exclusion. Elevated storage temperature may be desirable to maintain ease of pumping.</p> <p>Product temperatures over 122 °F (50 °C) are not recommended.</p> <p>Normal safety precautions (e.g., gloves and safety goggles) should be employed when handling MAKON NF-180. Contact with eyes, nose, or skin should be avoided. Wash thoroughly after handling MAKON NF-180. See the SDS for further information.</p>



## Clearances

The international inventories country clearances of MAKON NF-180, can be found in Section 15 of the SDS. **It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used.** If you have any further questions regarding inventories, please contact North America Technical Service at [techserv@stepan.com](mailto:techserv@stepan.com).

## Product Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

## Additional Safety Information

A Safety Data Sheet (SDS) is available upon request.



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**Stepan**   
**Corporate Headquarters**  
**Northfield, Illinois 60093, U.S.A.**  
**Phone: 847-446-7500**  
**Fax: 874-501-2100**  
**Website: [www.stepan.com](http://www.stepan.com)**

**For Technical Service Call:**  
Stepan North America **+1-800-745-7837**  
Stepan Mexico **+55-11-5089-2208**  
Stepan Quimica **+55-11-5089-2200**  
Stepan Colombia **+571-636-2808**  
Stepan Europe **+33-476-505-160**  
Stepan Asia **+656-879-9855**  
Stepan Philippines **+656-879-9855**

**For Customer Service Call:**  
Stepan North America **+1-800-457-7673**  
Stepan Mexico **+52-555-533-1967**  
Stepan Quimica **+55-11-5089-2200**  
Stepan Colombia **+57-6-8993125**  
Stepan UK **+44-161-338-5511**  
Stepan France **+33-476-50-51-00**  
Stepan Philippines **+63-2-842-7951**