



## Product Bulletin

Product Name	<b>MAKON® UD-6</b>																																										
Chemical Description	C11 Alcohol Ethoxylate, 6 EO																																										
Applications	MAKON UD-6 can be used in a wide variety of consumer and functional applications due to its degreasing power, fast wetting speed, emulsification, and low gel curve. Some applications include hard surface cleaning, degreasing, and laundry. MAKON UD-6 can function as a replacement for Tridecyl Alcohol Ethoxylates and Nonyl Phenol Ethoxylates due to its branched structure, low gel curve, and performance attributes.																																										
CAS Registry No.	127036-24-2																																										
Typical Properties	<table border="0"> <tr> <td>Appearance at 25 °C (77 °F) .....</td> <td>Clear to hazy liquid</td> </tr> <tr> <td>Actives, % .....</td> <td>100</td> </tr> <tr> <td>Water, % .....</td> <td>0.25</td> </tr> <tr> <td>pH, 10% aqueous .....</td> <td>8.0</td> </tr> <tr> <td>Color, APHA.....</td> <td>75</td> </tr> <tr> <td>HLB .....</td> <td>11.9</td> </tr> <tr> <td>Molecular weight, g/mol.....</td> <td>438</td> </tr> <tr> <td>Viscosity at 25 °C (77 °F), cps .....</td> <td>215</td> </tr> <tr> <td>Viscosity at 50 °C (122 °F), cps .....</td> <td>18</td> </tr> <tr> <td>Flash Point (PMCC), °C (°F).....</td> <td>&gt;94 (&gt;201)</td> </tr> <tr> <td>Cloud Point (5g in 25g Butyl Carbitol, 25%), °C (°F) .....</td> <td>69 (156)</td> </tr> <tr> <td>Cloud Point, 1% aqueous, °C (°F) .....</td> <td>35 (95)</td> </tr> <tr> <td>Pour Point, °C (°F) .....</td> <td>9 (49)</td> </tr> <tr> <td>Freeze Point, °C (°F) .....</td> <td>6 (42)</td> </tr> <tr> <td>Density at 25 °C (77 °F), g/ml (lbs/U.S. gal) .....</td> <td>0.99 (8.25)</td> </tr> <tr> <td>Density at 50 °C (122 °F), g/ml (lbs/U.S. gal) .....</td> <td>0.98 (8.16)</td> </tr> <tr> <td>Surface Tension at 0.1%, dynes/cm .....</td> <td>26.8</td> </tr> <tr> <td>Draves Wetting, 1% aqueous, at 25 °C (77 °F), sec .....</td> <td>3</td> </tr> <tr> <td>Critical Micelle Concentration, mg/L .....</td> <td>351.4</td> </tr> <tr> <td>RVOC, U.S. EPA, % .....</td> <td>0</td> </tr> <tr> <td>Preservative .....</td> <td>None required</td> </tr> </table>	Appearance at 25 °C (77 °F) .....	Clear to hazy liquid	Actives, % .....	100	Water, % .....	0.25	pH, 10% aqueous .....	8.0	Color, APHA.....	75	HLB .....	11.9	Molecular weight, g/mol.....	438	Viscosity at 25 °C (77 °F), cps .....	215	Viscosity at 50 °C (122 °F), cps .....	18	Flash Point (PMCC), °C (°F).....	>94 (>201)	Cloud Point (5g in 25g Butyl Carbitol, 25%), °C (°F) .....	69 (156)	Cloud Point, 1% aqueous, °C (°F) .....	35 (95)	Pour Point, °C (°F) .....	9 (49)	Freeze Point, °C (°F) .....	6 (42)	Density at 25 °C (77 °F), g/ml (lbs/U.S. gal) .....	0.99 (8.25)	Density at 50 °C (122 °F), g/ml (lbs/U.S. gal) .....	0.98 (8.16)	Surface Tension at 0.1%, dynes/cm .....	26.8	Draves Wetting, 1% aqueous, at 25 °C (77 °F), sec .....	3	Critical Micelle Concentration, mg/L .....	351.4	RVOC, U.S. EPA, % .....	0	Preservative .....	None required
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Environmental Effects	MAKON UD-6 is expected to be readily biodegradable. Additional information is available upon request.																																										
Health Effects	MAKON UD-6 is expected to be slightly toxic orally (LD50>2000 mg/kg, rat), and undiluted is moderately to severely irritating to skin and eye.																																										
Storage & Handling	<p>Normal safety precautions (e.g., gloves and safety goggles) should be employed when handling MAKON UD-6. Avoid contact with eyes or nose, or prolonged contact with the skin. Wash thoroughly after handling.</p> <p>MAKON UD-6 is prone to gelling when diluted in water. Heating may be required to minimize or eliminate gel formation.</p>																																										



Clearances

Standard Packaging: MAKON UD-6 is available in drum and totes.

Packaging Storage Information: MAKON UD-6 should be stored in original containers and kept in a cold, dry place away from incompatible materials. As a general rule for alcohol ethoxylates, non-bulk packages should be stirred to ensure they are homogeneous before use. If material is frozen, it should be heated gently and stirred to ensure it is homogeneous before use. Product should be stored between 0° C (32 °F) to 30 °C (86 °F).

The international inventories (country clearances) of MAKON UD-6 can be found in Section 15 of the Safety Data Sheet (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 American Technical Service at [techserv@stepan.com](mailto:techserv@stepan.com).

MAKON UD-6 meets the U.S. EPA Safe Choice Program's surfactant screen and is listed on [www.cleangredients.org](http://www.cleangredients.org) (an on-line database for green formulators). For further information, visit [www.cleangredients.org](http://www.cleangredients.org). Additional Stepan ingredient listing can be found at [www.stepan.com](http://www.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 is available upon request.



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