

Product Bulletin

MAKON® DA-4, DA-6, and DA-9

Product Name
Chemical Description
CAS Registry No.
Applications

MAKON DA series surfactants are ethoxylated isodecyl alcohols.
61827-42-7 (Alternate CAS Number 78330-20-8)

The MAKON DA products are a series of surfactants which provide emulsification, moderate foam, detergency and wetting. These products find application in laundry, textiles, hard surface cleaning, paints, carpet cleaning, hand dishwashing and institutional and industrial cleaning formulations. In addition, these products are effective emulsifiers and emulsifier blend components for pesticide formulations. They are used as HLB variables in most formulations and show good emulsification properties over a wide HLB range.

Typical Properties

	<u>MAKON DA-4</u>	<u>MAKON DA-6</u>	<u>MAKON DA-9</u>
Appearance at 25 °C.....	Clear Liquid	Hazy Liquid	Hazy Liquid
Density at 25 °C, g/ml (lbs/US gal).....	0.96 (8.0)	0.99 (8.2)	1.01 (8.4)
Moisture, %.....	1.0 max.	0.2 max.	1.0 max.
pH, 5% Aqueous.....	5-7	4.5-7	5-7
Viscosity at 25 °C, cps.....	30	80	65
Flash Point, PMCC, °C (°F).....	>94 (>201)	>94 (>201)	>94 (>201)
Cloud Point, 1% in H ₂ O, °C (°F).....	<25 (<77)	43 (109)	80 (176)
Hydroxyl Value.....	173	130	105
Pour Point, °C (°F).....	-13 (8)	6 (42)	1 (34)
Moles of EO, Average.....	4	6	9
HLB.....	10	12	14
RVOC, U.S. EPA, %.....	0	0	0
Solubility:			
Water.....	Dispersible	Soluble	Soluble
Methanol.....	Soluble	Soluble	Soluble
Kerosene.....	Insoluble	Insoluble	Insoluble
Xylene.....	Soluble	Soluble	Soluble

Storage & Handling

Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling MAKON DA series surfactants. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.

Bulk Storage Information: Stainless steel and glass fiber-reinforced polyester tanks are recommended. Many oven-cured phenolic and epoxy/phenolic linings may also be used.

MAKON DA series surfactants which have been stored in drums at temperatures below 60 °F (16 °C) may thicken or solidify. They 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. Product temperatures over 120 °F (49 °C) are not recommended.

Standard Packaging: MAKON DA-4 and DA-6 are available in drums (425 lb, 193 kg) and bulk quantities. MAKON DA-9 is available in drums (450 lb, 205 kg) and in bulk quantities.

Clearances

MAKON DA-4, DA-6, and DA-9 are listed in United States (TSCA 61827-42-7), Canada (DSL 61827-42-7), Europe (Polymer Exempt), Philippines (PICCS 61827-42-7), Australia (AICS 61827-42-7), New Zealand (NZIoC 61827-42-7), Korea (ECL KE-21507, 61827-42-7), Japan (ENCS 7-97, 61827-42-7) and China (IECSC 61827-42-7).



Clearances

MAKON DA-4, DA-6, and DA-9 are approved for use as inert ingredients under U.S. EPA 40 CFR 180.910 and 180.930.

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

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.

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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