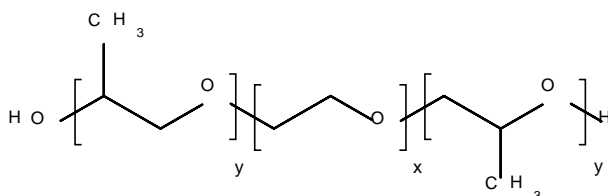


Product Bulletin

Product Name

MAKON® 17R4

Chemical Structure



Chemical Description

Polyalkylene Glycol

CAS Registry Number

9003-11-6

INCI Name

Merxapol 174

Applications

MAKON 17R4 is a nonionic reverse EO/PO block copolymer that exhibits fast-breaking, low foaming and defoaming properties and good detergency. MAKON 17R4 can be used in a variety of markets including Industrial, Institutional, Pulp and Paper, Textiles, and Household. Applications for best fit are metalworking fluids, dispersants, industrial lubricants, agricultural pesticide formulations, and low foaming detergents. MAKON 17R4 is a low ash product.

Typical Properties

Appearance at 25 °C	Clear Liquid
pH, 2.5% Aqueous	6.5
Actives, %	100
Water, %	0.2 max.
Color, APHA	80 max.
HLB	12
Average Molecular Weight, g/mol	2650
Hydroxyl Value, mg KOH/g	43
Cloud Point, 10% Aqueous °C (°F)	31 (88)
Cloud Point, 1% Aqueous °C (°F)	46 (115)
Pour Point, °C (°F)	10 (50)
Flash Point, °C (°F)	> 94 (> 201)
Viscosity at 25 °C (77 °F) / 38 °C (100 °F), cps	531 / 255
Density at 25 °C (77 °F), g/mL (lb/U.S. gal)	1.05 (8.73)
Density at 38 °C (100 °F), g/mL (lb/U.S. gal)	1.04 (8.65)
Surface Tension, 0.1% Aqueous, dynes/cm	45.2
Interfacial Tension with Light Mineral Oil, 0.1% Aqueous, dynes/cm	17.5
Draves Wetting at 25 °C (77 °F), 1.0% / 0.1% Aqueous, sec	> 90 / > 90
Foam Height, Ross-Miles at 25 °C (77 °F), 0.1% Aqueous, Initial / 5 min, mm	2 / 0
Foam Height, Ross-Miles at 50 °C (122 °F), 0.1% Aqueous, Initial / 5 min, mm	0 / 0
Foam Height, Blender at 25 °C (77 °F), 0.1% Aqueous, Initial / 5 min, mm	33 / 2
Solubility in Water at 25 °C (77 °F)	Soluble > 10 wt%
RVOC, U.S. EPA, %	0
Preservative	None required



Environmental Effects

Publically available data shows this type of chemistry to be inherently biodegradable.

Storage & Handling

Standard Packaging: MAKON 17R4 is available in drums, totes, and bulk quantities.

Non-Bulk Storage Recommendations: MAKON 17R4 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.

Bulk Storage Recommendations: MAKON 17R4 should be stored in vessels of 316 stainless steel, but carbon steel is adequate assuming effective moisture exclusion. Elevated storage temperature may be desirable to maintain ease of pumping.

Product temperatures over 122 °F (50 °C) are not recommended.

Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling MAKON 17R4. Contact with eyes, nose or prolonged contact with skin should be avoided. Wash thoroughly after handling MAKON 17R4.

Clearances

The international inventories (country clearances) of MAKON 17R4 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 America Technical Service at 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 is available upon request.



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