



DOWFAX™ 20B102 Nonionic Surfactant

General Information

The Dow Chemical Company is a science and technology-based company and one of the world's largest producers of polyalkylene glycols. Our worldwide research, manufacturing, and distribution includes facilities in Europe, North America, Latin America, and Asia-Pacific. With over 30 years experience in polyglycol manufacturing, the industry's broadest product line, and a leadership position in new product development, Dow is uniquely positioned to meet the needs of a diverse global marketplace. This success results from expanding our customers' markets through combined customer formulation knowledge and Dow alkoxylation expertise in joint development applications. Together we focus these resources to help ensure success for our customers and their products.

Sustainability Attribute:



DOWFAX™ Nonionic Surfactants

DOWFAX™ Nonionic Surfactants are high-performance products that feature excellent solvency, low foam characteristics, chemical stability, and a long list of other valuable performance properties. They are produced by polymerizing ethylene oxide (EO), propylene oxide (PO), and/or butylene oxide (BO) in the same molecule. The ratio and order of oxide addition, together with the choice of initiator, control the chemical and physical properties.

DOWFAX™ 20B102 Nonionic Surfactant —Product Characteristics

DOWFAX™ 20B102 Nonionic Surfactant is a clear liquid at room temperature with a low pour point. It is an efficient surfactant by having good wetting ability, high degree of surfactancy and low foam characteristic. DOWFAX™ 20B102 Nonionic Surfactant is readily miscible in water and can be used in combination with other surfactants in a wide variety of aqueous formulations. See Table 1 for Typical Properties of DOWFAX™ 20B102 Nonionic Surfactant. In addition, DOWFAX™ 20B102 Nonionic Surfactant is more soluble in cold water than in hot water, if inverse water solubility is required. The optimum operating temperature range for detergency and wetting ability is +/-10°C of the surfactant's cloud point in that system.

Applications and Uses

For high-pressure spray cleaning, DOWFAX™ 20B102 Nonionic Surfactant offers good wetting characteristics. It is used as a rinse aid and in high performance cleaners for automatic dishwashing units and metal-cleaning operations where fast wetting is required. DOWFAX™ 20B102 Nonionic Surfactant is readily biodegradable passing the OECD 301 test and complies with EEC directive 82/242/EEC, which governs surfactants use in detergents. Additionally, its aquatic toxicity is greater than 1 mg/L.

Applications and Uses (Cont.)

DOWFAX™ 20B102 Nonionic Surfactant is also used in textile processing auxiliaries, household cleaners, metalworking fluids, and water treatments for low foam characteristics and wetting ability.

Table 1:

Typical Properties of DOWFAX™ 20B102 Nonionic Surfactant

Property	Unit	Value	Test ¹
Concentration	%	95	By weight
Viscosity @ 25°C	cSt	78	ASTM D 445 / D 446
Cloud Point, 1% Aqueous	°C	32	ASTM D 2024
Cloud Point, 10% Aqueous	°C	31	ASTM D 2024
Cloud Point, 10% Solvent ²	°C	44	ASTM D 2024
Wetting Time @ 25°C	sec	30.9	DIN 53901
Wetting Time @ 70°C	sec	34	DIN 53901
Surface Tension ³	mN/m	60	ASTM D 1331
Pour Point	°C	-8	ASTM D 97
Specific Gravity @ 25°C/25°C	g/cm ³	1.003	ASTM D 892

1. ASTM: American Society for Testing and Materials
DIN: Deutsche Industrie Norm
2. 10% surfactant in a solution of 25% diethylene glycol butyl ether in water
3. Temperature 20°C, 1% surfactant in water

Notice: The information and data contained herein do not constitute sales specifications.
No liability, warranty or guarantee of final product performance is created by this document.

Technical Expertise When and Where You Need It

Dow experts on DOWFAX™ Nonionic Surfactants are regionally located to quickly respond to your needs. They are globally networked to take maximum advantage of years of combined experience. Whether your question involves products, applications, or regulations, Dow offers comprehensive customer and technical service.

Safe Use and Handling

DOWFAX™ 20B102 Nonionic Surfactant is easy to store and handle. For specific safe use and handling information, or to obtain a DOWFAX™ 20B102 Nonionic Surfactant Material Safety Data Sheet, contact your local Dow representative or please visit us at www.dow.com.

Product Stewardship

Dow encourages its customers and potential users of DOWFAX™ 20B102 Nonionic Surfactant to review their applications from the standpoint of human health and environmental aspects. To help ensure that DOWFAX™ 20B102 Nonionic Surfactant is not used in ways for which it is not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Safety Data Sheets, should be consulted prior to the use of DOWFAX™ 20B102 Nonionic Surfactant.

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