Technical Data Sheet

DOWFAX™ 63N40 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:

Returna™
Advancing biodegradability with Dow

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™ 63N40 Nonionic Surfactant is a linear copolymer. It is an efficient surfactant by having good wetting ability, high degree of detergency and low foam characteristics. DOWFAX™ 63N40 Nonionic Surfactant is readily miscible in water and can be used in combination with other surfactants in a wide variety of aqueous formulations. The optimum operating temperature range for wetting ability and low foam characteristics is +/- 10°C around the surfactant's cloud point in that system. See Table 1 for Typical Properties of DOWFAX™ 63N40 Nonionic Surfactant.

Applications and Uses

DOWFAX™ 63N40 Nonionic Surfactant makes a particularly efficient high temperature foam control agent due to its reverse water solubility and low foam characteristic. It is used in such processes as fermentation, food processing, adhesives, paper processing, and metalworking products. It can be reacted with an organic acid to form an ester, which are also effective foam control agents. In other applications, DOWFAX™ 63N40 Nonionic Surfactant is used as a rinse aid, an industrial surfactant, an emulsifier and a component of sanitizing solutions.

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.

Table 1:

Typical Properties of DOWFAX™ 63N40 Nonionic Surfactant

Property	Unit	Typical Value	Test Method[1]
Viscosity @ 25°C	cSt	589	ASTM D 445 / D 446
Cloud Point, 1% Aqueous	°C	62	ASTM D 2024
Cloud Point, 10% Aqueous	°C	26/63	ASTM D 2024
Cloud Point, 10% Solvent[2]	°C	72	ASTM D 2024
Wetting Time @ 25°C	sec	38.6	DIN 53901
Wetting Time @ 70°C	sec	43	DIN 53901
Surface Tension[3]	mN/m	> 300	ASTM D 1331
Pour Point	°C	7	ASTM D 97
Specific Gravity (@ 25°C/25°C)	g/cm^3	1.050	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.

Safe Use and Handling

DOWFAX™ 63N40 Nonionic Surfactant is easy to store and handle. For specific safe use and handling information, or to obtain a DOWFAX™ 63N40 Nonionic Surfactant Material Safety Data Sheet, contact your local Dow representative or please visit us at www.dow.com. DOWFAX™ 63N40 Nonionic Surfactant has been shown to be readily biodegradable in the Manometric Respirometry test according to OECD Guideline 301 F.

Product Stewardship

Dow encourages its customers and potential users of DOWFAX™ 63N40 Nonionic Surfactant to review their applications from the standpoint of human health and environmental aspects. To help ensure that DOWFAX™ 63N40 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™ 63N40 Nonionic Surfactant.

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