# DOWFAX 20A612
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.

**DOWFAX Nonionic Surfactants**

DOWFAX® Nonionic Surfactants are high-performance products that feature excellent solvency, low foam characteristics, chemical stability, and 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 20A612 Nonionic Surfactant — Product Characteristics**

DOWFAX 20A612 Nonionic Surfactant is a clear, slightly viscous liquid at room temperature with a low pour point. It is an efficient surfactant by having low foam characteristic and high degree of surfactancy. See Table 1 for Typical Properties of DOWFAX 20A612 Nonionic Surfactant. In addition, DOWFAX 20A612 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 low foam control is +/-10°C of the surfactant’s cloud point in that system.

## APPLICATIONS AND USES

Due to its low foaming characteristic, DOWFAX 20A612 Nonionic Surfactant is used in cleaning formulations that are applied by high pressure sprays like automatic dishwashing detergents and metal cleaning production. It is also used in textile processing auxiliaries, household cleaners, bottle washing, liquid and powder detergents, food and beverage equipment cleaning, metalworking fluids and water treatments.

DOWFAX 20A612 Nonionic Surfactant makes an effective foam control agent in aqueous environments due to its low foam characteristic and inverse water solubility. Typical applications include defoaming in paper production, metal degreasing and industrial cleaning operations.

## TECHNICAL EXPERTISE WHEN AND WHERE YOU NEED IT

Dow experts on polyalkylene glycols 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.

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**Table 1**

<table>
<thead>
<tr>
<th>Property (Unit)</th>
<th>Typical Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity @ 25°C (cSt)</td>
<td>120</td>
<td>ASTM D 445/D 446</td>
</tr>
<tr>
<td>Cloud Point, 1% Aqueous (°C)</td>
<td>8</td>
<td>ASTM D 2024</td>
</tr>
<tr>
<td>Cloud Point, 10% Aqueous (°C)</td>
<td>8</td>
<td>ASTM D 2024</td>
</tr>
<tr>
<td>Cloud Point¹, 10% Solvent (°C)</td>
<td>28</td>
<td>ASTM D 2024</td>
</tr>
<tr>
<td>Surface Tension², (mN/m)</td>
<td>31.4</td>
<td>ASTM D 1331</td>
</tr>
<tr>
<td>Wetting Time @ 25°C, (sec)</td>
<td>61</td>
<td>DIN 53901</td>
</tr>
<tr>
<td>Wetting Time @ 70°C, (sec)</td>
<td>&gt; 300</td>
<td>DIN 53901</td>
</tr>
<tr>
<td>Pour Point (°C)</td>
<td>-21</td>
<td>ASTM D 97</td>
</tr>
<tr>
<td>Specific Gravity (g/cm³ @ 25°C/25°C)</td>
<td>0.990</td>
<td>ASTM D 892</td>
</tr>
</tbody>
</table>

¹10% surfactant in a solution of 25% diethylene glycol butyl ether in water
²Temperature 20°C, 1% surfactant in water

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No liability, warranty or guarantee of final product performance is created by this document.

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DOWFAX Nonionic Surfactants
Focused on your success

**Safe Use and Handling**
DOWFAX 20A612 Nonionic Surfactant is easy to store and handle. For specific safe use and handling information or to obtain a DOWFAX 20A612 Nonionic Surfactant Safety Data Sheet, contact your local Dow representative.

**Product Stewardship**
Dow encourages its customers and potential users of DOWFAX 20A612 Nonionic Surfactant to review their applications from the standpoint of human health and environmental aspects. To help ensure that DOWFAX 20A162 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 20A162 Nonionic Surfactant.

To find out more about how DOW polyglycol products and services can help ensure the success of your product or formulation, call the number for your area listed below:

- In Europe:
  - Tel: +32 3 450 2240
  - Fax: +32 3 450 2815

- In the U.S. and Canada:
  - Tel: 1-800-447-4369
  - Fax: 1-989-832-1465

- In Asia-Pacific:
  - Tel: +852 2879 7339
  - Fax: +852 2827 5881

- Other Areas:
  - Tel: 1-989-832-1556
  - Fax: 1-989-832-1465

www.dow.com/polyglycols

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