



High Mole Ethoxylates

≥ 15 mole EO

Description

Using Sasol's patented narrow range ethoxylation catalyst technology, ethoxylates of excellent quality can be produced with up to 150 moles of EO using a variety of branched alcohols. The alcohol hydrophobes can be linear or branched depending on the desired properties. The NOVEL® High Mole Ethoxylates yield surfactants that:

- Are classified as "Readily biodegradable" according to standard OECD methodology
- Provide excellent emulsification properties
- Contain < 0.5 wt.% residual alcohol
- Exhibit significantly lower polyethylene glycol content (< 1.5 wt.%) than traditionally catalyzed ethoxylates
- Are 100% active products (unless otherwise requested*)
- Are white solids that melt to slightly hazy to clear liquids

Applications

Sasol's NOVEL® High Mole Ethoxylates may be used in a wide array of applications. These applications include oilfield, metalworking fluids, textiles, emulsion polymerization, and any other applications where high mole alkylphenol ethoxylates (APEOs) are utilized.

Improved Color for High Mole Ethoxylates

Below is a cetearyl alcohol ethoxylated to 40 moles. The left is catalyzed with NOVEL catalyst while the right is catalyzed with traditional caustic catalyst (45% potassium hydroxide). Each was catalyzed with 0.1 and 0.5 weight percent catalyst (left and right, respectively, in each photo).

Examples of Sasol High Mole Ethoxylate Products



NOVEL Catalyst (0.1 and 0.5% catalyst)



Caustic Catalyst (0.1 and 0.5% catalyst)

*Looking for something easier to handle?

All of Sasol North America's branched high mole ethoxylates can be blended with water to obtain products that are easier to handle. These blends are either liquid at room temperature, or they require less heating in order to make them liquid. For more information, please contact us.



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Examples of Sasol High Mole Ethoxylate Products

All of Sasol North America's branched high mole ethoxylates have a free EO content ≤1 ppm and a pH (1% in IPA/Water) of 5-8. Typical physical properties are listed in the table below. Actual properties may vary from lot to lot.

Surfactant	Moles of EO	HLB	Melting Point, °C	Hydroxyl Number	Density, 60°C g/cm ³	Viscosity, 60°C, cSt
NOVEL® TDA-20 Ethoxylate	20	16.3	33	52	1.02	38
NOVEL® 23E20 Ethoxylate	20	16.4	36	52	1.03	37
NOVEL® 16-20 Ethoxylate	20	15.7	45	50.0	1.01	46.6
NOVEL® 18-20 Ethoxylate	20	15.3	45	48.8	1.01	44.9
NOVEL® 12-23 Ethoxylate	23	16.9	40	46.8	1.03	39.8
NOVEL® 22-25 Ethoxylate	25	15.4	53	39.3	1.00	73
NOVEL® 1618-28 Ethoxylate	28	16.6	47	37.7	1.03	63.3
NOVEL® TDA-30 Ethoxylate	30	17.3	42	37	1.04	60
NOVEL® 23E30 Ethoxylate	30	17.5	45	37	1.04	58
NOVEL® TDA-40 Ethoxylate	40	17.9	48	29	1.05	93
NOVEL® TDA-70 Ethoxylate	70	18.8	57	17	1.07	371
NOVEL® 2426-150 Ethoxylate	150	18.9	61	8	1.06*	2099*

*at 80°C

Contact Information

For technical information and/or samples:

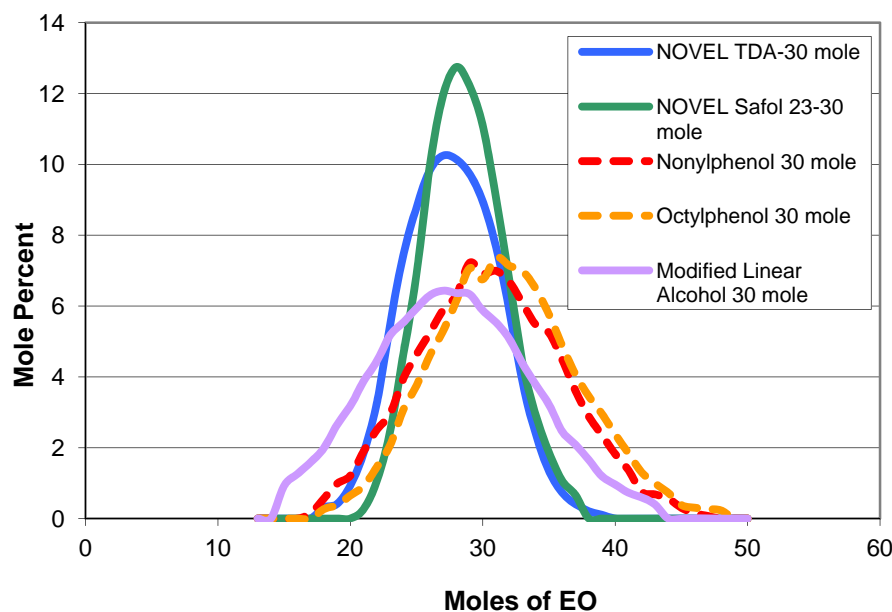
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Example of the Narrow Range Distribution for High Mole Ethoxylates

Variation appears from lot to lot.



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For detailed safety and handling information regarding these products, please refer to the respective Sasol North America Material Safety Data Sheet.