A look at today... and a glimpse

Armour's ethoxylated chemicals

Most industries have surfactant problems that can be solved by Armour's versatile polyethoxylated derivatives. These compounds range from completely oil soluble to completely water soluble, and from cationic to non-ionic in activity.

More than 40 different chemicals offer you a wide range of properties to work with in solving your own surfactant problems. This great flexibility assures you exactly the right combination for each application.

The etho-chemicals fall into five major groups—the Ethomeens®, Ethoduomeens®, Ethomids®, Ethofats® and the newly introduced Ethoquads®.

Where Armour's ethoxylated chemicals work today

Mineral oil emulsions. In processing paper and textiles, three properties make Ethomeen S/15 (polyethoxylated soya amine) an important cationic emulsifying agent for mineral oils. These properties provide: (1) effective anti-static results; (2) increased ability to adjust the stability of emulsions; and (3) excellent hard water tolerance. Because this chemical provides an anti-static property to emulsions, it is especially valuable when working with wool and synthetic fibers.

For more information, check "A" in the coupon.

Sound absorbers. Improved sound-proofing compounds are being made by wetting asbestos or fiber fillers rapidly and uniformly with chemically-treated asphalt. The chemical that makes it possible is Ethoduomeen T/13 (a polyethoxylated N-tallow diamine). It's proving to be a vital ingredient in many asphalt-based undercoating materials for automobiles and in several important industrial sound-deadening compounds.

More technical data is available. Check "B" in the coupon.

Agricultural emulsifiable concentrates. Many manufacturers are discovering that non-ionic Ethofats can be combined with either anionics or cationics to produce far more efficient blends of emulsifiers. For example, improved emulsification of the oil solutions of DDT, chloradane, toxaphene, and 2,4-D is being obtained by using an Ethofat.

Ethofat C/15 (polyethoxylated coconut fatty acid) and Ethofat 242/25 (polyethoxylated rosin fatty acid) are proving to be excellent wetting agents for wettable powders in several pesticide formulations.

Want more details? Check "C" in the coupon.

Silicone emulsions. Major silicone suppliers are today recommending Armour’s Ethomids as non-ionic emulsifiers for silicone resins. Ethomid emulsions are stable in both concentrated and dilute form. They show little tendency to rewet or yellow, and are compatible with most finishing resins. Ethomid HT/15 (polyethoxylated hydrogenated tallow fatty amide) and Ethomid 0/15 (polyethoxylated oleamide) are currently being used in this particular application.

Check "D" in the coupon for more complete information.

Chemical structures

The Ethoquads® are a new series of polyethoxylated quaternary ammonium compounds formed by quaternization of the Ethomeens.
of tomorrow  
from Armour Chemical

The Ethomeens® are prepared from n-alkyl primary amines. They have an ethylene oxide content ranging from 2 to 50 moles per mole of amine.

\[
\text{R—N—CH(CH_2O)_xH} \quad \text{R—N—CH(CH_2O)_yH}
\]

The Ethoduomeens®, like Ethomeens, are reaction products of amines and ethylene oxide. The difference: Ethoduomeens are obtained by the ethoxyla-

\[
\text{(CH}_3\text{CH}_2\text{O)}_x\text{H} \quad \text{(CH}_3\text{CH}_2\text{O)}_y\text{H}
\]

The Ethomids® are N, N-substituted fatty acid amides. The substituents being polyoxyethylene groups. The Ethomids are chemically neutral and rather unreactive.

\[
\text{RCN} \quad \text{(CH}_3\text{CH}_2\text{O)_xH} \quad \text{(CH}_3\text{CH}_2\text{O)_yH}
\]

The Ethofats® are mono-fatty or rosin acid esters of polyoxyethylene glycols. These esters are fairly stable in mildly acid or alkaline solutions. They can, how­ever, be hydrolyzed by refluxing with strong acids or alcalies.

\[
\text{RCO(CH}_3\text{CH}_2\text{O)_xH}
\]

Armour's  
ethoxylated chemicals tomorrow

Armour research with the etho-chemicals finds their versatility to be virtually unlimited.

Examples: Ethomeens are suspending high density metallic fines in selected oil systems. Ethoduomeens are being evaluated as building blocks for asphalt adhesion additives and as cationic asphalt emulsi-

Investigate the Ethoquads, Ethomeens, Ethoduomeens, Ethomids and Ethofats. Find out what they're doing in your industry. Send the coupon or call Armour today.

NEWS NOTES

Chicago. Recent modifications in pilot plant production and analytical methods now assure more uniformity in alpha sulfoalkyl acids ... RCH(SO_3H)COOH. New samples of alpha sulfoalumic and alpha sulfosteric acids are now available from Armour.

Barcelona, Spain. The first shipment of Ethomeen to this country arrived from New York. These ethoxylated aliphatic amines are finding widespread use in the country's expanding synthetic fiber industry.

Akron, Ohio. Armour's oleyl nitrile, Arneel®, OD, is replacing Arneel SD (soya nitrile), as a synthetic rubber plasticizer. Recent tests show this particular Arneel offers a greatly reduced odor level, more uniform consistency and slightly improved physical properties at low temperatures.

McCook, III. Production of the Ethofat 142 series was recently discontinued with the introduction of Ethofat 0/15 and 0/20. In addition to the new products having equivalent emulsifying characteristics, they have a very low percentage of linoleic acid which mini-

How can the etho-chemicals help you?

Check here for more information on your field of interest.

Send sample for this application:

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