News Release



Exxal™ alcohols

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New Surfactants Data from ExxonMobil Supports Product Development, Sustainability and Ecolabeling

- Study data will help manufacturers determine proper regulatory classification of their products
- Biodegradability and toxicity results published in the *Journal of Surfactants and Detergents*

Spring, **Texas** – ExxonMobil announced the publication of a series of studies aimed at helping formulators and manufacturers support new product development, sustainability product performance attributes and eco-labeling requirements. This body of work aggregates 30-years of data based on performance of ExxonMobil Exxal[™] alcohols and their ethoxylates and was recently published in the peer-reviewed *Journal of Surfactants and Detergents*.

With the release of this data, manufacturers now have, for the first time, access to publicly available biodegradability and aquatic toxicity data needed for the proper regulatory classification of surfactants derived from Exxal branched alcohols. The researchers also demonstrated that when compared to linear or semi linear counterparts, many of these branched alcohol ethoxylates were less toxic, have lower classification and labeling requirements under the United Nations' Globally Harmonized System (GHS) of Classification and Labeling of Chemicals, and may qualify for environmentally friendly consumer labels.

"As regulations and consumer demands shift, there is an increasing need for aquatic toxicity data on surfactants," Gail E. Bragin, a senior scientific associate at ExxonMobil Biomedical Sciences and lead author on the paper, said. "Our goal was to make this data as openly and publicly available as possible so that surfactant producers, regulators and researchers can assess and make full use of it."

In recent years, regulators and end users have become increasingly aware that some chemicals may persist in the environment, leading to efforts to regulate the use and release of such materials. The EU's Safer Detergents Regulation and the U.S. Environmental Protection Agency's Safer Choice and EU Ecolabel labeling programs require that surfactants demonstrate a fast rate of biodegradation.

The studies also confirmed that the Target Lipid Model is a useful tool to predict the toxicity of many branched and linear alcohol ethoxylates in surfactant mixtures, supporting the model's use in assessing new alcohol ethoxylates and mixtures, which can reduce the need for costly environmental toxicity studies and shorten development cycles.

"We used the model in these studies to measure the effects on aquatic organisms, but it can do the same on sediment and soil organisms, providing a broader assessment of environmental risk," said Bragin.

To access this data, please visit our website.

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About ExxonMobil

ExxonMobil, the largest publicly traded international energy company, uses technology and innovation to help meet the world's growing energy needs. ExxonMobil holds an industry-leading inventory of resources, is one of the largest refiners and marketers of petroleum products and its chemical company is one of the largest in the world. For more information, visit www.exxonmobil.com or follow us on Twitter www.twitter.com/exxonmobil.

About Exxal alcohols

ExxonMobil Exxal alcohols are isomeric branched, primary alcohols that contain both even- and oddnumbered hydrocarbon chains, ranging from C8 to C13. Our high-purity Exxal alcohols exhibit reactivity typical of higher primary alcohols. Thanks to their branched structure, Exxal alcohols offer many performance advantages to ethoxylates compared to linear alcohol-based ones.