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9-0283-13-100-00

Ethoxybrite EFA 100% biobased

C_n-C_{n+2}.mEO

Ethoxylated fatty alcohol

CAS nr: 68603-25-8 (C8C10); 14409-72-4 (C9); 68002-97-1 (C10C16); 9002-92-0 (C10C12); 68439-50-9 (C12C14); 68551-12-2 (C12C16); 68213-23-0 (C12C18); 161133-70-6 (C16C20);

Einecs nr: 500-213-3 (1EO-2.5EO)); 931-014-3 (>2.5EO); polymer

Product information

Synonyms: fatty alcohol ethoxylate; poly oxy ethylene alkyl alcohol; poly ethylene alkyl ether $C_nH_{2n+1}(OCH_2CH_2)_{.m}OH$, in which n is the number of C-atoms in the fatty chain and e is the average number of moles ethylene oxide per molecule

Ethoxylated fatty alcohols are mild, non-ionic surfactants based on RSPO palm kernel oil. Their mildness results from the fact that non-ionic surfactants do not have a strong electric charge. They are especially suitable in:
- cleaning wool and other delicate fabrics
- cleaning face, hands and other skin
- emulsifying in detergents, cosmetics and water treatment
- wetting of surfaces in skin/hair cosmetics and water treatment

The length of the (dirt dissolving) fatty chain is given by the number of C-atoms. The number of water binding ethoxy groups is given by the amount of mol EO; the number of bonded molecules ethylene oxide per molecule Ethoxybrite EFA.

There are synthetic ethoxylated fatty alcohols (made from crude oil); those have an odd number of C-atoms (C9-C11-C13-C15-C17, etc). The ethoxylated fatty alcohols with even number of C-atoms are derived from natural sources like palm oil. So the even number of C-atoms in Ethoxybrite EFA means that a vegetal raw material is used.

Historically, the ethoxylation is performed with ethylene oxide of petrochemical source.
Sirius International and its partners managed to perform above mentioned step by exclusively adding ethylene oxide from a vegetal source. As such, Ethoxybrite EFA biobased is the ideal raw material for any green, 100% sustainable, ecologically certified detergent.

The higher the cloud point, the higher the solubility of Ethoxybrite EFA in water. The cloud point is the temperature at which an aqueous solution of a water-soluble surfactant becomes turbid. This is also the point at which the carbon chains acquire so much energy that they let go of each other. The non-ionic separates into its own phase. For maximum efficacy, Ethoxybrite's EFA should be used at temperatures at or just below their cloud point. Optimizing micelle formation can limit the chain lengths of ethoxylated fatty alcohols that are available for your application. Our Ethoxybrite EFA line has a number of chain lengths available so that one can tailor the non-ionic to do what is required.

Product specifications

Test Item	Ethoxybrite C12C14.7EO (example)
Appearance	Colourless liquid
Active content, %	99.0 - 100
pH (1%aq)	6.0 – 8.5
Cloud point, °C	54 - 58
Moisture, %	0.5 max
Glycol, %	1.0 max
Color (APHA)	50 max
Hydroxyl value, mgKOH/g	106 -116
Cloudy titration value	15.0 – 15.7
Relative density	0.888 – 0.893
HLB value	8-9

This one examples of one of the many Ethoxybrite's EFA possibilities
Please ask us for the specifications of your specific C-chain and EO-number.

Commercial

Packaging: 1000liter IBC's, 24mt ISO tank container (bulk)
Lead time: 9 weeks

Sirius is member of the RSPO, the international Round table of Sustainable Palm Oil. This institution hands out certificates for palm oil products, such as soap noodles and ethoxylated fatty alcohols, which are harvested and produced sustainably, with protection of nature and workers.

Technical

Ethoxybrite's EFA are liquid raw materials and ideal for use in liquid detergents. They are also easily absorbed onto carriers such as Silibrite SMS and Silibrite SDS, and thus applicable in washing powders.