



BIOFUELS SOLUTIONS

Efficient solutions for
a sustainable market

ANTIFOAM

For efficient control of foam formation during Ethanol production, is extremely necessary to use polyglycol to avoid loss of productivity.

INDORAMA Ventures' SURFCANE® Series provides premium efficiency in foam control even in low concentrations.

Trade Name	Chemical Description	Cloud Point*	<ul style="list-style-type: none"> ■ Premium Efficiency ■ Low Dosage ■ Low Toxicity
SURFCANE® AF 55	Polyglycol	55 °C	

INDORAMA Ventures also offers a wide range of FDA-listed Foam-Control Surfactants for several applications, providing more flexibility to our customers.

Trade Name	Chemical Description	Cloud Point*	FDA	ANVISA
SURFCANE® AF 33	Polyglycol	33 °C	21 CFR 172.808 - Additive to direct contact 173.310 - Boiler water additives 173.340 - Defoaming agents 175.105 - Adhesives 175.300 - Resinous and polymeric coatings 176.180 - Paper in contact with dry food 176.200 - Defoamers used in coatings 176.210 - Defoamers used in the manufacture of paper 176.300 - Slicicides	RDC 88/2016
SURFCANE® AF 56		56 °C		
SURFCANE® AF 68		68 °C		
SURFCANE® AF 74		74 °C		

*1:6 in 25% Butyl diglycol/H₂O

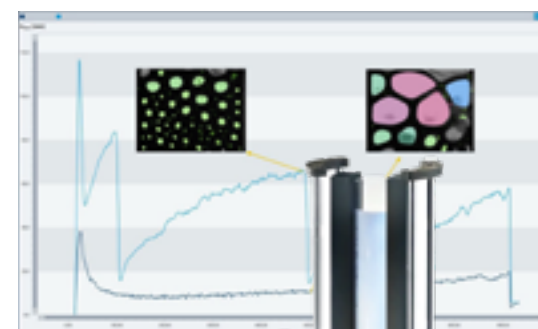
FDA = U.S. Food and Drug Administration | CFR = Code of Federal Regulations | RDC = Resolução de Diretoria Colegiada | ANVISA = Agência Nacional de Vigilância Sanitária

Capabilities

Indorama asserts its portfolio performance with cutting-edge methodologies and equipment, delivering the best information on foaming profiles in fermentation media.

Our cornerstone in performance assessments is our Dynamic Foam Analyzer (DFA 100): An asset that not only automates foam height analysis but also delivers data on foam stability and bubble size.

- Foam height analysis via software
- High precision
- Real-time comparison between analyses
- Camera attached to the equipment
- Bubble area measurement
- Real time bubble population view



Characterization of foam with Defoamers - Real-time Test

Dinamyc Foam Analyzer - DFA 100



CORN OIL DEMULSIFIERS

Corn Ethanol represents the majority of Ethanol World Production and stands out for its ability to generate important co-products with high value. Among these, we can highlight corn oil, extracted from alcohol distillation residues.

To assist in corn oil extraction, Indorama offers the ALKEST® Series, which will increase the efficiency of corn oil production, reducing energy costs and increasing the profitability of biorefineries.

Trade Name	Chemical Description	HLB	Certifications	Origin
ALKEST® TW 60	Ethoxylated Sorbitan Ester / Polysorbate	14.9		
ALKEST® TW 60 K		14.9		
ALKEST® TW 80		15.0		
ALKEST® TW 80 K		15.0		
ALKEST® TW 80 Y		15.0		
ALKEST® CSO 300		Ethoxylated Castor Oil	11.7	
ALKEST® CSO 360	12.6			
ALKEST® CSO 400	13.1			

FDA | HALAL | KOSHER | VEGETAL





DISCLAIMER

This information is provided in good faith, based on Indorama's current knowledge of the subject and is purely indicative. No information, including suggestions for using the products, should preclude experimental testing and verification, which are essential to ensuring the suitability of the products for each specific application. Consult the contact from your region or country regarding the availability of each product. All users must also respect local laws and obtain all the necessary permits. When handling the product, consult the safety data sheet. If you have any questions or additional needs, please contact Indorama Ventures through our customer service channels. MAI/24.