BioBreak
Biopolymer Emulsion Breakers

Q: What are BioBreak Biopolymer technology?

A: Emulsion Breakers are divided into two (2) main categories. Direct Emulsion Breakers where water droplets are dispersed in the oil phase and Reverse Emulsion Breakers where oil droplets are dispersed in water phase. BioBreak Biopolymer technology is a suite of products based on naturally occurring polymer materials that are Reverse Emulsion Breakers. There is a total of three (3) different BioBreak Biopolymers. These are REB-30, REB-36 and REB-37. These products are water-based, not regulated for transportation purposes as they are not categorized Dangerous Goods for transportation.

Q: How do BioBreak Biopolymers function?

A: BioBreak Biopolymer technology suite REB-30, REB-36 and REB-37 has the objective to reduce oil (hydrocarbons) in water. They are Reverse Emulsion Breakers and can reduce the oil (hydrocarbons) in water to below 10 ppm and in some cases below 5 ppm with no solids formation.

Q: How are the differences between the BioBreak Biopolymer products?

A: BioBreak Biopolymer technology suite REB-30, REB-36 and REB-37 have different molecular weights and molecular architecture. This enables the products to be used in different applications. The REB-30 material is usually used for the bulk oil remove from water and REB-36/REB-37 as a polisher.

Q: Where can the BioBreak Biopolymers be applied?

A: BioBreak Biopolymers are usually added to the water phase on its own or combined with a Direct Emulsion Breaker. The combination minimizes water contents in oil (hydrocarbons) as direct emulsions as well as minimized oil (hydrocarbons) in water as reverse emulsions. Applications can vary but they can be applied to the inlet of separators, KO Drums, heater treaters or Gun Batters and Desalters. The injection can also be carried out inside these vessels.

Q: Are sample kits of BioBreak Biopolymers available and what's the quantity of sample in each kit?

A: The standard BioBreak Biopolymer sample kit is 15 ml per sample. These are used at 1-20 ppm. Hence, 15 ml is considerable volume. Likely the sample will not be entirely used in the lab for several months.

The BioBreak Biopolymer materials are extremely powerful. For lab testing it needs to be diluted to 1 % as these operate on average at 5 ppm. Hence, you need to add 50 µl of a 1% solution of BioBreak to have 5 ppm in the mixture. Let me know if this makes sense. This dilution is only for lab testing because the µl volume required of the concentrate would be 100x lower and very difficult to inject in lab. Therefore, proper dilution is necessary. This is not the case for the actual process applications where the products are used as is.

To request a BioBreak sample kit, send an email to: info@nxchemical.com

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Q: Using BioBreak Biopolymer products, how low can the hydrocarbon content be in the treated water?

A: When using the BioBreak Biopolymer products, the residual oil content in the water is usually 5-10 ppm.

Q: Can you specify applications for BioBreak Biopolymer technology?

A: Any application where there is a need to remove oil from water. BioBreak Biopolymers can reduce the oil content in water by 1 order of magnitude. This can be massive for oil savings and also environmental protection as the materials are consider Green Chemistry. BioBreak Biopolymer also dont form sludge in the vessels and are easy to use. The materials dont not have the injectability problems that current technology present. Reducing oil content in water is crucial to various industries where water is used as a resource or discharged as effluent. Industries where there's a need to reducing oil content in water are:

- Wastewater: Various industrial processes generate wastewaters that need careful oil content reduction.
- Oil and Gas: Despite being the source of much of the world's oil, the industry requires strict measures to minimize oil contamination in water, both during extraction processes and in wastewater management.
- Petrochemicals: Similar to the oil and gas industry, petrochemical plants deal with various hydrocarbons and must ensure minimal oil contamination in water resources.
- Manufacturing: Industries such as metalworking, automotive, and electronics manufacturing often use oils and lubricants in their processes, leading to potential contamination of water sources if not managed properly.
- Marine: Shipbuilding, ports, and offshore industries produce oily wastewater, either from operations or accidental spills, necessitating effective oil-water separation technologies.
- Food Processing: Food processing plants generate oily wastewater from cleaning processes, cooking, and production, requiring efficient oil removal to meet regulatory and water quality standards.
- Mining: Mining activities can introduce oils and lubricants into water bodies, which can have detrimental effects on aquatic ecosystems. Effective oil removal is necessary to mitigate environmental impacts.
- Power Generation: Power plants, particularly those using fossil fuels like coal or oil, may produce oily wastewater through various processes, including cooling and cleaning systems.
- Chemical Industry: Chemical manufacturing processes may involve oils or oily substances, leading to the potential contamination of water resources if not properly managed.
- Textile Industry: Textile manufacturing often involves the use of oils and dyes, which can contaminate water if not adequately treated before discharge.
- Agriculture: Agricultural activities, such as pesticide and fertilizer application, can lead to oil contamination in waterways, especially when runoff occurs.

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Q: What are the benefits of using the BioBreak Biopolymer technology?

A: Using the BioBreak Biopolymer technology has the following benefits:

- Lower residual hydrocarbon content in the water
- Fast phase separation
- No solids or sludge formation in process equipment leading to minimal or no hydrocarbon losses
- Simple to handle and inject into the process or pipeline
- Sustainable and environmentally responsible biopolymer-based materials

Q: Where is the BioBreak Biopolymer technology produced?

A: The BioBreak Biopolymer technology is produced in Texas, USA

Q: What is the delivery lead-time for BioBreak Biopolymer technology?

A: The BioBreak Biopolymer technology has a lead-time of 2-3 weeks delivery

Q: What are the packaging options for BioBreak Biopolymer technology?

A: The packaging options are: 55-gallon drums, 330-gallon totes or 5000-gallon truckloads.

Q: What are the Incoterms for the BioBreak Biopolymer technology?

A: Ex Works, Texas USA. However, shipping can be organized and added to the invoice if necessary.

Q: How can we help?

A: Contact below.

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