

Novus* flocculants

clarification and dewatering liquid emulsion polymers

- Cost-effective
- NPE-free
- Available in a range of molecular weights, charge densities and structures

description and use

Novus products are high molecular weight water-soluble polymers. They are designed to function in a variety of industrial water and wastewater treatment applications.

In liquid-solid separation treatment programs, polymers are used as “coagulants” for charge-neutralization of colloidal particles, and as “flocculants” for agglomeration of particles into larger particles or “floc”. SUEZ’s KlarAid* product line encompasses the coagulants. The Novus product line encompasses flocculants designed to bridge small particles together, enhancing floc formation. This increases settling velocity in clarification, or rise-rate in flotation applications, and improves water removal in thickening and dewatering applications.

products and services offered

The Novus product line provides a comprehensive portfolio with broad cationic charge level and molecular structure, thereby allowing SUEZ to provide products for both raw and wastewater clarification, flotation enhancement and sludge conditioning (for thickening and dewatering). All of the products in the series are designated as Novus CE, identifying them as cationic emulsions.

Novus products are provided as part of a comprehensive treatment program by highly technical field personnel who evaluate each customer’s specific application needs and treatment objectives, before selecting the optimum product for that situation.

Typically, on-site testing is performed to identify a cost-effective solution.

SUEZ’s Novus products are applied as part of a comprehensive package of products, operational recommendations and modern monitoring capabilities to ensure an effective overall solution for the customer.

application and treatment

The uniqueness of the Novus line resides in the molecular structural variations and their performance related to specific applications. The line includes grafted polymer chains that are well suited for fibrous solids treatment, “pseudo-stars” that are very effective for oil laden liquid-solids separation, and cross-linked structures for high shear applications.

Proper application and treatment levels depend on many factors and flocculant treatment programs are specifically designed for each individual facility’s needs. However, there are some common requirements as discussed next

The products need to be dissolved in water before use. As oil-continuous materials in neat form, they require inversion prior to use, to convert the products to a water-continuous (soluble) material for maximum performance. Batch mix-tanks or continuous “make-down” systems can be employed for this purpose. Typically, the product is added to water with an appropriate amount of mixing, to obtain a solution strength of 0.25- 0.5% on a volume/volume basis. Continuous-feed equipment is available from SUEZ to automate this process and provide maximum product effectiveness.

Diluted product may be fed by a pump or by gravity flow to a point where good mixing, but not violent agitation, with the substrate stream occurs. Sludge

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thickening and dewatering applications require careful engineering of feed systems and will be optimized for each location by SUEZ's field engineers. Typically, flocculant applications require careful consideration of mixing conditions.

Storage, handling and safety instructions are provided with every product in the form of written recommendations and detailed MSDS.

solution benefits

SUEZ's Novus products, applied following an in-depth system audit, providing engineered application and operational recommendations, will ensure one or more of the following benefits:

- Cost-effective clarification and flotation operations for improved effluent quality
- Cost-effective thickening and dewatering applications for increased sludge solids content (minimal water content)
- ISO certified quality products
- SUEZ technical expertise in optimizing process unit operation
- SUEZ assistance in monitoring performance of process unit
- Meeting environmental regulations reliably
- Compliance with health and safety requirements with SUEZ support and documentation
- Ability to adapt to changing water, wastewater and sludge quality, due to access to wide portfolio of SUEZ products
- On-site service will provide product selection and operational advice as needed
- Delivery and billing options to meet almost any customer need