

Wastewater Treatment Chemicals

Creating sustainable solutions for wastewater treatment

Whatever your industry, it is important to understand your challenges and recognise the opportunities involved in creating sustainable solutions for wastewater treatment. Chemistries must treat severely contaminated water for reuse or safe discharge, addressing such issues as organics (COD), suspended solids, heavy metals, ammonia, and odours.

Alongside these chemistries, solutions should include on-site application expertise. This integrated approach, together with automated feed control, sophisticated monitoring with *highly developed* data analytics, offers potential users a diverse and innovative set of solutions for any water, wastewater, or process challenge.

Coagulants and Flocculants for Water Treatment

It is also important to have a comprehensive portfolio of coagulants and flocculants that aid in the clarification process. Whether users need coagulants or flocculants, liquid, emulsion, or powders, cationic or anionic products, they will want a cost-effective solution for their raw water and wastewater. Application expertise must range from operational optimisation to selecting and applying chemical treatment programs while providing lowest total cost of operation for solids separation and colour removal needs. Examples of relevant SUEZ products are:

KlarAid* coagulants – highly charged inorganic, organic and blended coagulants for clarification of industrial water and wastewater

KlarAid products are ready to use water-soluble coagulants, ranging from polymeric inorganic and organic coagulants to single container blends. They are designed to function in a variety of industrial water and wastewater treatment applications, including use as a primary coagulant for removal of colloidal turbidity and colour for raw water clarification, as a demulsifier to facilitate liquid solids separation in dissolved gas flotation units for primary wastewater treatment, and settling and filter aids used separately or in conjunction with organic flocculants.

The **KlarAid** product line encompasses a comprehensive portfolio of chemistries ranging from classic inorganics to modified natural products, such as amphoteric tannins and starches, to modern synthetic organic chemistries. They encompass relatively low to high cationic charge densities.

One of the highest costs in many water and wastewater treatment plants is sludge disposal. *It is vital that solutions providers* work with their customers to choose coagulants that can minimize sludge production, thereby reducing plant operating costs.

Novus* flocculants – high molecular weight polymers for use as clarification, flotation, and dewatering aids

The **Novus** product range covers both cationic and anionic, high molecular weight water-soluble polymers provided as liquid emulsions, providing the right balance of ease of use and cost-effectiveness. They are designed to function in a variety of industrial water and wastewater treatment applications.

The **Novus** product line provides a comprehensive portfolio with a broad range of charge and molecular structure, thereby producing products for both raw and wastewater clarification, flotation enhancement and sludge thickening and dewatering.

Metals Removal

As regulations become increasingly strict on metals discharge and as water reuse becomes more widely practiced, the removal of heavy metal contamination becomes more important. The right approach is to carefully diagnose the situation and determine the correct balance of solids separation and metals precipitation technology needed.

In addition to standard coagulants and flocculants, there are several proprietary metals precipitants in the **MetClear** product line. This combination of technologies will provide far lower residual metal concentrations, of all the standard heavy metals, than other traditional treatment approaches.

Foam Control

There is also a wide range of defoamers or antifoam products that can solve all foam issues. Appropriate representatives will approach foam problems in the same practical manner that they approach all water treatment needs. They will go onsite, assess the situation, and then carry out testing of the range of FoamTrol products to pick the best one for the wastewater. Following the visit, it is important that a detailed report of the antifoam evaluation be issued explaining the options available.

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