



HYDRAPRIME[®] HP-7767

Single dose coagulant/polymer blend for water treatment

Description

HYDRAPRIME[®] HP-7767 is an absorbent clay based, single-shot chemistry containing coagulants, polymers and other ingredients designed for water clarification of oily and difficult to treat waters. It will help encapsulate and separate suspended & colloidal solids, colour & inks, emulsified oils & greases, phosphates, heavy metals and dissolved organics. The treated water can be reused or discharged while the resultant sludge is easy to handle, dewater well and produces a non-leachable sludge.

Product Benefits

- » Helps remove colour, suspended & colloidal solids, oils & grease, dissolved organics
- » Heavy metals and phosphate removal
- » Excellent dewaterability
- » Non-leachable sludge suitable for non-hazardous landfill

Product Background

HYDRAPRIME HP-7767 is a well portioned blend of coagulants, polymers, bentonite and other ingredients designed for treatment of hard to treat waters. HP-7767 is dosed directly into the wastewater as a powder and can be applied to continuous and batch processes.

The coagulant in the blend helps to demulsify oils, destabilise colloidal particles, precipitate phosphates and assist in heavy metal removal, allowing for easier separation. The clay provides enormous adsorption potential to capture dissolved organics, it provides a good seed for floc formation and helps remove heavy metals. The long-chained polymer helps create a large, robust floc that improves sludge handling and dewaterability. HP-7767 also contains an alkalinity agent to help lift the pH. This is especially suited to waters that have a low pH before the treatment begins. For waters that have a high pH before treatment we recommend our HP-7767

HP-7767 is suitable for use with both flotation and sedimentation type separation devices including DAF, IAF, clarifier, inclined plate separator and batch tanks.

HP-7767 dewater extremely well with all types of sludge dewatering equipment including belt and screw press, plate & frame, geotube and filter cloth. Under free drainage conditions HP-7767 provides fast drainage and excellent sludge capture using 80 micron weaves. The resultant supernatant should be clear and suitable for discharge.

Properties

Form:	Powder
Colour:	Buff to brown clay
Bulk density:	1.1
pH:	10–11 (1% slurry)

Product Application

For optimum performance, HP-7767 should be fed as a powder to a well-mixed and highly turbulent location of the water circuit. Dose rates are best determined by jar testing as they are application specific. Typical dose rates vary from 500–5,000 mg/L.

HP-7767 takes less than 10 minutes to completely transform the wastewater stream into two distinct phases of water and sludge. For most applications the sludge will then settle leaving a clear supernatant.

HP-7767 will work over a wide pH range from 5–11 with optimum results being achieved between pH 7–9.

HP-7767 prefers 1–2 minutes of high energy mixing (to ensure complete wetting and sufficient mixing), followed by a longer period of lower energy mixing to allow floc growth. The lower energy mixing helps reduce the likelihood of flocs breaking apart due to high shear.

On addition of HP-7767, and after high energy mixing, fine particles (pin floc) should become evident in less than 1 minute. If a pin floc does not appear after 2 minutes then add another portion of HP-7767.

For continuous applications, HP-7767 can be dosed via a powder screw feeder into a turbulent (well-mixed) tank or process stream. For simple batch applications, HP-7767 can be dosed manually into a turbulent section or vortex of a mixing tank.