

WASTE TREATMENT MARKET OVERVIEW

APPLICATIONS FOR SEPARATION POLYMERS

Industry	Industry Subcategory	Influent	Process Water	Waste-water
Metal Finishing	Electroplating	X		X
	Electrolessplating	X		X
	Anodizing			X
	Coating/Phosphatizing			X
	Chemical Etching			X
	Printed Circuit			X
	Board Manufacturing			X
Mining & Aggregate Processing	Sand & Gravel Plants		X	
	Coal Preparation		X	X
	Iron Ore Mining		X	X
Miscellaneous Industrial Processing	Glass Plants			X
	Small Refineries		X	X
	Hazardous Waste Processors		X	X
	Battery Makers		X	X
	Foundries		X	X
	Asphalt Plants		X	X
	Power Plants	X		

Food Processing	Red Meat/Poultry			X
	Potato Processors			X
	Potato/Corn Chips			X
	Seafood Processors			X
	Vegetable/Fruits			X
	Dairies (Small Town)			X
	Edible Oils			X
	Specialty Products			X
	Bottled Water	X		X
	Beverage Plants	X		X

APPLICATIONS

Each industry generates its own type of contaminating solids. Fats and oils tend to float on water, while denser solids, like sands, will settle. Large masses separate rapidly in water. Normally solids are encountered as a very fine suspension slow to either float or settle in water.

Separation Polymer products act like chemical magnets, attracting finely suspended solids into larger masses which separate much faster in the water.

Though there are many types of solids to be separated from water, the systems are basically designed to separate the solids from water after allowing them to either float and/or settle. When solids still resist these tendencies, a system may be designed to filter out the solids.

METAL FINISHING INDUSTRY

Waters used to rinse parts accumulate contaminants which must then be separated from the water before it is sewerred. For example, after each stage in which a part is cleaned, plated or otherwise treated it is rinsed off. Oils, toxic metals like zinc, copper, and cadmium, cleaners and soils must be separated from those dirtied rinses before they are sewerred.

The contaminants are separated out as the waters flow through a series of tanks in a treatment system. In the first tank, floating oil is skimmed off. In the second the chemistry of the contaminant water is changed. In the third the settleable solids do so and are removed as sludge. The water itself is then allowed to flow to a sewer.

Your chemicals help separate emulsified oils, chemically precipitate and coagulate solids, and efficiently separate those solids by flocculation to achieve water clarity.

FOOD PROCESSING INDUSTRY

The large volumes of water used to keep these facilities and the food clean often must be treated to remove contaminants before the water can be discharged to a sewer.

In a plant that slaughters hogs, cattle, or poultry, fat and blood that end up in rinse waters must be separated out before the water can be sewered. The contaminated waters flow into large tanks. There fats float to the surface and are subsequently removed by skimming. The blood is also removed after it is chemically treated.

Separation Polymers are used to improve upon the rate of floatation or settling of fats, oils, greases and soils.

AGGREGATE PROCESSING

Large volumes of water are used to wash very fine soils off gravel or stone. Processors are interested in removing the fines from the dirtied water so that the water can be reused.

Typically the dirtied wash waters are allowed to stand in large holding basins so that the fines settle to the bottom. The cleaner water is then reused. Polymer flocculants can be added to the dirty water as it enters the pond. The polymer makes the slow-to-settle fines come together in a larger, more rapid settling mass. This allows the processor to reuse the improved water sooner.

BASIC SEPARATION POLYMER PRODUCT LINE

Most of the applications that you will be exposed to use Separation Polymer products to perform one of two functions, coagulations or flocculation, of suspended solids.

Normally, solids finely suspended in water are first coagulated into somewhat larger pinpoint-like masses then flocculated into even larger snowflake-like masses.

The basic chemical theory that we use is attracting solids with a chemical magnet. The terms anionic and cationic are used to define the magnetic change which distinguishes one product from another.

Products are available in three physical forms; liquids, liquid-emulsions and powders.