



## MixCat™

An advanced inline polymer mixing system that efficiently conditions sludge for dewatering.

Park Process's inline polymer system is designed for use with liquid polymer for the continuous delivery of a blended dilute polymer solution. Neat polymer is pumped into the water stream (supplied by the city water or pressurized water system), where it immediately passes through a series of static mixers, which produces a thoroughly blended solution. A post-dilution line installed in the system allows incoming water to be sent into the mixed solution downstream of the first set of static mixers (to help enhance the blending of the polymer with water, if necessary). A second set of static mixers further mixes and blends the solution prior to injection into the sludge stream. An optional low-flow switch can be installed in the system which shuts off the polymer pump if water pressure falls below a predetermined amount.

The MixCat™ system uses a low-maintenance peristaltic type polymer pump. This pump passes polymer "fisheyes" that could plug up a diaphragm type metering pump. The pump is simple to maintain with only the peristaltic tube requiring periodic replacement.

## Applications Include:

- Bio-solids Flocculation
- Alum Sludge Flocculation
- Grease Trap Waste Flocculation
- Septic Tank Waste Flocculation

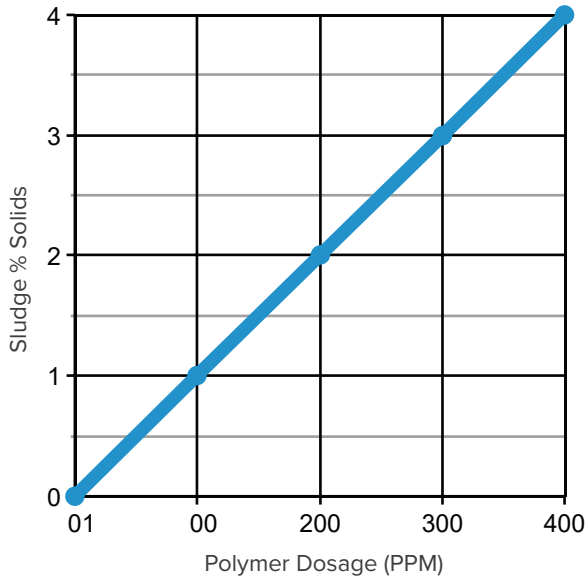
## Mixing Formula:

The most common dilution for polymer solutions is 0.5%. This dilution is adequate for most sludge flocculation applications. Using this number (0.5%) as the desired dilution amount, and given the standard 3.96 gph polymer metering pump, the following relationship will be generally true:

Pump Speed	Water Flow
100%	13.32 gpm
75%	10 gpm
50%	6.66 gpm
25%	3.33 gpm
10%	1.33 gpm



**Polymer Dosage Graph**



PPM	Polymer / Sludge Ratio
50	1 Gal. polymer / 20,000 Gal. sludge 1 Gal. dilute polymer / 100 Gal. sludge
100	1 Gal. polymer / 10,000 Gal. sludge 1 Gal. dilute polymer / 50 Gal. sludge
150	1 Gal. polymer / 6,600 Gal. sludge 1 Gal. dilute polymer / 33 Gal. sludge
200	1 Gal. polymer / 5,000 Gal. sludge 1 Gal. dilute polymer / 25 Gal. sludge
250	1 Gal. polymer / 4,000 Gal. sludge 1 Gal. dilute polymer / 20 Gal. sludge

**Flow Rates of Dilute Polymer Solution / Flow Rate of Sludge**

Sludge Flow GPM	Dilute Polymer Flow GPM at Different % Solids				
	0.50%	1.00%	1.50%	2.00%	2.50%
50	0.50	1.00	1.50	2.00	2.50
75	0.75	1.50	2.25	3.00	3.75
100	1.00	2.00	3.00	4.00	5.00
125	1.25	2.50	3.75	5.00	6.25
150	1.50	3.00	4.50	6.00	7.50
175	1.75	3.50	5.25	7.00	8.75
200	2.00	4.00	6.00	8.00	10.00

