

CECO Mefiag

A Division of CECO Environmental

BULLETIN 901
SETHCO
DEPTH
FILTER TUBES
FOR FILTRATION
DOWN TO .5 MICRONS



- HIGH FLOW RATE - LOW PRESSURE DROP
- HIGH EFFICIENCY
- HIGH SOLIDS HOLDING CAPACITY - LONG SERVICE LIFE
- SIMPLE TO USE - EASY TO REPLACE
- STANDARD SIZES
- SPECIFICALLY DESIGNED FOR CORROSIVE SERVICE
- ECONOMICAL

Sethco filter tubes are fabricated of natural or synthetic fiber wound over a perforated plastic or metal core. The precision winding pattern covers the entire depth of the filter tube with hundreds of funnel shaped tunnels which become gradually finer from the outer surface to the center of the tube and trap progressively finer particles as the fluid travels to the center. This allows much greater solids retention capacity than is associated with surface filter media of the same dimensions.

The winding pattern provides depth filtration areas of 36 sq. in. for each No. 1 filter tube, 72 sq. in. for each No. 3 filter tube, 2.0 sq. ft. for each No. 5 and 5A filter tube and 3.5 sq. ft. for each No. 10 and 10A filter tube.

Each No. 5 and 5A tube will retain approximately 1/4 to 1/2 lb. of solids and each No. 10 and 10A tube will retain approximately 1/2 to 1 lb. of solids before replacement becomes necessary. The amount of solids retained depends on the type of solids in the solution as well as the head developed by the pump.

No. 20 and No. 20A and No. 30 and No. 30A filter tubes are respectively two and three times the length of No. 10 tubes, and have two and three times the filter area and solid retention capacity of No. 10 tubes.

TYPES OF FILTER TUBES AND SUPPORTING CORES

Cotton, polypropylene, and acetate filter tubes are available. Supporting perforated cores for cotton or polypropylene are stainless steel, polypropylene or steel. Supporting cores for acetate tubes are tin plated copper with voile liner.

Stainless steel cores are recommended for mildly acid and all alkaline solutions, pH 4 to 14.

Polypropylene cores are used where all metal contact must be eliminated or where stainless steel is attacked, such as high chloride and sulfuric acid solutions. It is recommended for all acid and alkaline solutions, pH 0-14.

Steel cores are used for dilute alkaline solution, solvents, lacquers, oils, emulsions, etc.

FILTER TUBE SELECTION

See Filter Tube Selection Guide

Cotton filter tubes are recommended for moderately acid and alkaline solutions in the pH range of 3-11.

Polypropylene filter tubes are recommended for concentrated acid and alkaline solutions and for all fluoborate solutions over the entire pH range of 0-14.

Polypropylene filter tubes are also recommended for electro-polishing solutions, as well as certain other highly corrosive solutions.

Acetate filter tubes are recommended for water.

Sethco filter tubes are available in densities to filter out particles from 0.50 to 150 microns. Standard densities are coarse 50 microns, medium 25 microns, fine 15 microns, x-fine 10 microns, x-x-fine 5 microns and Special B 1-3 microns. Most applications use fine density tubes.

Filter tubes are available in a variety of positively controlled densities between .5 and 150 microns to provide the exact degree of micro-clarification your application requires.

PRESERVING THE LIFE OF FILTER TUBES

When Filtering Highly Contaminated Solutions

1. Allow sediment to settle overnight and filter from the top of the solution by gradually lowering the intake hose.
2. When this procedure is not feasible, use Sethco coarse or medium density filter tubes for the initial filtration. For subsequent filtration use finer filter tubes.
3. For maximum filter tube life and efficiency, operate at rated flow rates. Filtering above rated capacity will force solids through the filter tubes or cause premature clogging.

For any application not listed in the adjoining columns please feel free to call or write our engineers who will be glad to make appropriate filter tube recommendation.

SETHCO FILTER TUBE SELECTION GUIDE

	ELECTROPLATING SOLUTIONS	FILTER TUBE MATERIAL/CORE	RECOMM'D MICRON RATING
ACID TYPE (FLUOBORATES)	Copper, Iron, Led, Tin	Polypropylene/PP	15
ACID TYPE (NOT FLUOBORATES)	Copper, Tin and Zinc- Less than 6 oz/gal sulfuric	Polypropylene or Cotton/PP	15
	Copper, Tin and Zinc- Over 6 oz/gal sulfuric acid	Polypropylene/PP	15
	Chromium	Polypropylene/PP	3-15
	Gold, Indium, Rhodium, Palladium	Polypropylene/PP	3-10
	Iron Chloride (190°F)	Polypropylene/PP	15
	Nickel (Woods)	Polypropylene/PP	15
	Nickel (Watts type & Bright)	Polypropylene/PP or Cotton/PP	15
	Nickel (Hi-chloride)	Polypropylene/PP or Cotton/PP	15
	Nickel Sulfamate Electrolytic Copper and Nickel	Polypropylene/PP or Cotton/PP	15 10-15
ALKALINE TYPE	Tin (stannate)	Cotton/SS	15-25
ALKALINE	Brass*, Cadmium*, Copper*, Zinc*	Cotton/SS, Polypropylene/PP	15-50
CYANIDE TYPE	Gold, Indium, Platinum, Silver	Cotton/SS or Polypropylene/PP	3-10
PYROPHOSPHATE TYPE	Copper, Iron, Tin, etc.	Cotton/SS or Cotton/PP	15-25
ELECTROLESS TYPE	Nickel Plating Solutions	Polypropylene/PP Cotton/SS or Cotton/PP	3-10
	Copper	Polypropylene/PP	3-10
	CHEMICALS	FILTER TUBE Material/Core	
ACIDS	Acetic-Dilute	Cotton/SS or Polypropylene/PP	as chemical supplier or your process dictates
	Acetic-Concentrated Boric Acid	Polypropylene/PP Cotton/SS or Polypropylene/PP	
	Chromic Acid, Hydrochloric, Nitric Phosphoric, and Sulfuric	Polypropylene/PP	
	Hydrofluoric, Fluoboric Acids	Polypropylene/PP	
ALKALIES	Sodium or Potassium Hydroxide	Polypropylene/PP	
	Ammonium Hydroxide-Dilute	Cotton/SS or Polypropylene/PP	
	Ammonium Hydroxide-Concentrated	Polypropylene/PP	
CHEMICALS, MISC.	Biological Solutions	Cotton/SS, Polypropylene/PP	
	Electropolishing solutions	Polypropylene/PP	
	Pharmaceutical solutions	Cotton/SS, Polypropylene/PP	
	Photographic solutions	Cotton/SS or Polypropylene/PP	
	Radioactive solutions	Cotton/SS	
	Ultrasonic cleaning solutions	Cotton Special B/SS	
	Nickel Acetate 190° F	Cotton/SS	
	Food Products	Cotton/SS or Polypropylene/PP	
ORGANIC LIQUIDS	Carbon Tetrachloride	Cotton/Steel or SS	
	Dichlorethylene	Cotton/Steel or SS	
	Hydraulic Fluids	Cotton/Steel or SS	
	Lacquers	Cotton/Steel or SS	
	Perchloroethylene or Trichloroethylene	Cotton/Steel or SS	
	Solvents	Cotton/Steel or SS	
PETROLEUM PRODUCTS	Fuel Oil, Diesel, Kerosene, Gasoline, Lube Oil	Cotton/Steel or SS	

When operated as hi-speed baths at high temperatures (above 140°F) or with high alkali content, use Polypropylene/PP

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