Gusmer Enterprises, Inc.®

Cellu-Flo Fiber Filter Aids

Product Data Sheet

Gusmer offers Cellu-Flo filter fiber aids that are widely used in many filtration applications. Cellu-Flo fiber can be used exclusively or as part of a body feed system to lengthen the filtration cycle time while improving filtration efficiency. Developed for use as a primary precoat and/or body feed, Gusmer's Cellu-Flo filter aids are available in many different fiber length distributions and formulations.



Typical Applications

As a primary precoat and/or body feed for:

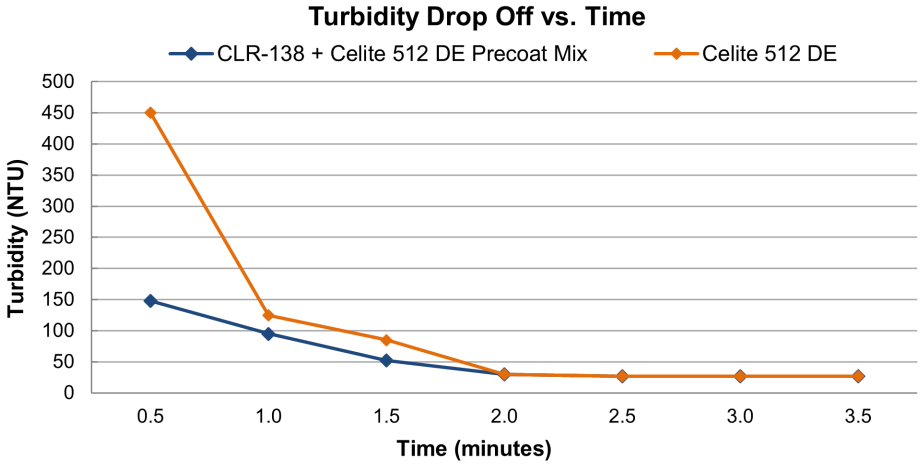
- Gusmer Cellu-Stack® filters
- Plate and Frame filters
- Pressure Leaf filters
- Recessed Plate Filter Presses

Benefits

- Establish and maintain filtrate clarity.
- Prevent blinding of filter septum and prolong septum life.
- Increase filter flow rates and improve filtration cycle times.
- Improve filter cake stability, enhance cake release and discharge.
- Prevent diatomaceous earth (DE) breakthrough when used in combination with DE.
- Use as an absorbent for oils and waxy contaminants.

Available Grades

Grades	Description
CLR	Derived from pure, highly refined alpha cellulose fibers
SL	Derived from select softwood.
RW	Derived from hardwood.



The addition of cellulose to the DE slurry immediately improves the filtrate quality by reducing the DE bleed through as measured by the turbidity.

Note:
Loading rate = 5 lbs/100 ft^2 fiber; 10 lbs/100 ft^2 DE.
Addition rate = 1.5 GPM with 1% slurry of DE or mix

Precoating

A precoat is formed by re-circulating Cellu-Flo fiber through the filter vessel until a cake is produced. A precoat serves two basic functions. It protects the surface of the filter media from contaminants that may prematurely blind it, which is often the case when filtering solutions containing gels, waxes or other surface plugging contaminants. Cellu-Flo fiber will also facilitate greater filtrate clarity at the beginning of the filtration run. This requires a precoat layer thick enough to prevent initial penetration of the filter surface area by the impurities being removed. It is recommended that the liquid used to form the precoat slurry have similar characteristics of the liquid to be filtered.

Precoating and Body Feed Instructions

PRECOATING PROCEDURE	BODY FEED PROCEDURE
• Add the calculated amount of Cellu-Flo fiber to a precoat tank. The amount of precoat required is related to the effective filtration surface area. The precoat cake thickness should be approximately 1/8 inches (3.2mm). The ideal concentration in the precoat tank should be between 3-6 grams per 1000 grams of precoat solution to form a consistent cake. If the precoat concentration in the tank is too high, it can result in an irregular precoat formation. • Refer to the table below for the Cellu-Flo dry weight requirements. • The precoat tank should contain enough liquid to fill the filter vessel in addition to enough extra liquid for recirculation of the slurry. • Agitate the slurry until the fibers are uniformly dispersed. • Recirculate the precoat slurry through the filter until the filtrate is clear.	• Following the formation of the precoat, Cellu-Flo fiber can also be added to the product to be filtered as a body feed. With batch type operations, add the Cellu-Flo fiber directly to the product, keeping it agitated throughout the entire filtration process. Body feeding greatly increases cake permeability, resulting in much longer filtration cycles. • The amount of body feed required depends on the concentration of insoluble solids contaminant, and ranges from 25% of the weight of incompressible solids to five or more times the weight of gelatinous solids. A slurry concentration of 0.1% to 0.3% by weight of the total volume of the bath is recommended. Used in the above manner, the fiber continually renews the filter surface. • Filtration is generally carried out at a constant rate and continues until a differential pressure of 30-35psi is reached or until the maximum cake septum area is depleted.

Cellu-Flo dry weight requirement for 1/8” (3.2mm) cake/100ft^2 (9.3 m^2) surface area

Cellu-Flo Grade	RW-100	RW-40	CLR-138	SL-138	CLR-236
Precoat Dry Wt - lbs (kg)	11.5 (5.2)	9.2 (4.2)	5.6 (2.5)	5.1 (2.3)	3.6 (1.6)

Fiber Length Percentages in Various Micron Ranges

	> 250 Microns	180-250 Microns	150-180 Microns	106-150 Microns	45-106 Microns	< 45 Microns
RW-100	0.1%	7.2%	8.4%	12.9%	49.3%	22.1%
RW-40	0.4%	13.1%	14.7%	29.6%	29.2%	13.0%
CLR-138	9.3%	28.9%	8.8%	12.7%	24.3%	16.0%
SL-138	54.0%	13.3%	7.7%	8.7%	14.4%	1.9%
CLR - 236	64.0%	11.0%	8.0%	5.0%	7.0%	5.0%

Packaging

Cellu-Flo fiber is packaged in multi-wall bags. Palletizing is available upon request.

Please contact your distributor or Gusmer Enterprises for the proper grade and recommended dosage for your specific application.

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Important Note: *Gusmer Enterprises, Inc. provides this information to the best of our knowledge. This information does not claim to be complete and Gusmer Enterprises, Inc. cannot assume liability for improper use. All users are advised to test products to meet their specific needs.*