



Ultra-Web® SB Cartridge Filters Withstand High Humidity in Gypsum Manufacturing

INDUSTRY: Gypsum Wallboard

PROBLEM: Ambient humidity negatively affected the properties of the fine-to-medium sized gypsum dust. The dust agglomerated and plugged up the filters with a hard crystalline material, creating very high pressure drop in the dust collector and causing too-frequent filter changes.

SOLUTION: Donaldson Torit Ultra-Web SB filters in existing Donaldson Torit Downflo II dust collector.



Ultra-Web SB filters don't blind-off with gypsum dust in the high-heat and humid conditions of the wallboard manufacturing plant.

Gypsum wallboard is composed of fiberglass, paper, vermiculite, calcium sulfate dehydrate. During manufacture, heat and moisture cause gypsum dust to get sticky. Later the dust dries into a hard crystalline material that “blinds off” (plugs) the filters in the dust collector. What a challenge!

When the plant engineer for this major midwestern wallboard manufacturer heard of new moisture-resistant Donaldson® Torit® Ultra-Web® SB cartridge filters, he decided to give them a try in his Downflo® II dust collector. The 24-filter unit is located by an end-trim saw to capture dust as the wallboard is cut to a specific length.

Ultra-Web SB combines the excellent surface-loading and dust release capabilities of Ultra-Web nanofibers with a strong spunbond polyester substrate, to create cartridge filters with durability, moisture and chemical tolerance, long life, high efficiency, and significantly lower pressure drop for energy-efficient operation. Ultra-Web SB cartridge filters have wide pleat spacing, allowing thorough pulse-cleaning of fine and fibrous particulate.

The wallboard maker now reports being pleased with the performance in his Donaldson Torit Downflo II, and said he will switch the other three collectors (another Downflo II, a Pangborn, and a Sly) to the Ultra-Web SB media soon. He said he has some of the same issues with the other cartridge collectors and would like to see if they can realize the same benefits as they have with the first Ultra-Web SB installation. The Pangborn is used as a “backup” for the Donaldson Torit collector, while the Sly is on their “wet” process, which is gypsum, sugar, starch, vermiculite, and some Aqualite in dispersion.

The plant engineer said, “Pressure drop across the filters is consistently around 4-inches water gauge, much better than in the past. And all of the mechanics are impressed with the new media. It’s much better performance than with the past filter media.” ○

	Commodity Filters	Ultra-Web SB Filters	Benefits
Pressure Drop	9 "wg	4 "wg	Filters last longer with fewer filter changeouts

10_Ultra-Web-SB-Cartridges_Gypsum

Donaldson
Torit®

Donaldson Company, Inc.
Industrial Air Filtration
P.O. Box 1299
Minneapolis, MN
55440-1299 U.S.A.

Tel 800.365.1331
donaldsontorit@donaldson.com
www.donaldsontorit.com
www.ultrawebeisalwaysbetter.com

