

AMETIP™ Processed Polymer Filter Powders

FEATURES & BENEFITS

- Increases pack life two to three times that of silica sand
- Remains inert to hot polymer melts
- Resists compaction
- Superior capillary strength
- Superior dyeability
- Superior yarn continuity
- Superior denier uniformity

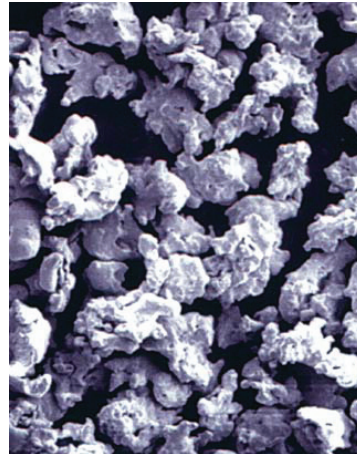
“AMETEK has received our highest level SILICA SAND PARTICLES of supplier recognition, the Quality Leadership Award. In my 25 years of experience working with powdered metal filter media, I find AMETEK to simply be the best.”

Rex Bannister, Senior Research Associate
E. I. duPont de Nemours & Company

The demand for synthetic fibers with features to those of natural textiles has increased the need for certain end products characteristics such as strength, color and texture. However, traditional filtration methods such as glass, silica sand and wire mesh cannot efficiently produce the high quality, popular fibers in demand today.

FILTER MEDIA SELECTION

Achieving the highest quality fibers requires selecting the right filtering medium in the spin pack. AMETIP Processed Filter Powders are the right spin pack filtering medium for outstanding continuity, fiber quality and volume performance. Unlike sand, the irregular shapes of powder are extremely effective at shearing polymer micro gels, as well as trapping foreign materials in the polymer melt. The greater surface-to-volume ratio of metal powder particles results in superior filtering capabilities. Exact control of polymer temperature is critical to avoiding capillary breakage and dyeing differences. AMETEK powders are four times more effective at conducting heat than silica sand, so heat from the spin pack can be removed much faster.



P316L STAINLESS STEEL POWDER



SILICA SAND PARTICLES

SAND VS. METAL POWDER

	DP-1	AME 32	TYPE 316L STAINLESS STEEL	SILICA SAND
Relative Velocity	40	40	40	42
Polymer Melt Temp. (OC)	291	291	291	291
Cross-sectional Area of Filter Cavity—in.2 (cm ²)	3.02 (19.5)	3.02 (19.5)	3.02 (19.5)	3.02 (19.5)
Spinning Breaks/1000 lb.	1.9	1.7	1.7	4.3
Pack Life (day)*	25	17	15	7

* Pack life is the extrusion time elapsed until the pack pressure equals a preset pressure for the pack. DuPont published test data with interpolated data for AME 32

“We rely on AMETIP processed stainless steel particles that are consistently uniform in size. It gives us the high performance we require in the spinning process.”

Franco Tajana, General Manager
AmericanMicrell

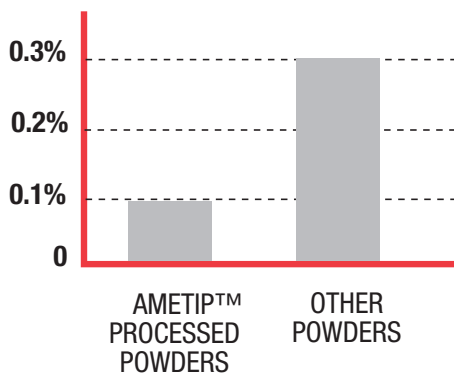
HIGH PRESSURE FILTRATION

When a very high filtration pressure in the pack is necessary, choose **DP-1***, a special chemistry metal powder that is harder than stainless steel powder and even more resistant to compaction in very high filtration pressure applications.

AMETEK's filter-grade powders are atomized to produce the highly irregular and jagged shapes required for precise filtration, making the powders ideal for maximum shear filtration. AMETIP processed powder resists compaction and maintains high porosity during spinning.

AMETIP's process removes superfine particles from filtration powders. As a result, there is less likelihood of clogging in the spin pack. When you reduce the downtime for unnecessary spinnerette cleaning, you increase production volume.

PERCENTAGE OF FINE POWDERS



AMETIP processed filtration powders are available in a wide variety of mesh or micron sizes. You can effectively control spinning pressures and increase pack life with AMETEK powders sized to your exact specifications.

**DP-1 is a DuPont product*

AMETEK®
SPECIALTY METAL PRODUCTS
Innovative & Advanced Metallurgical Technology

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AVAILABLE SIZES

AMETEK powders are available in a variety of sizes. Special sizes are available upon request.

Mesh is listed in USA sieve series per ASTM E-11. Cross reference to Tyler mesh sizes as indicated.

	316L	AME 32	DP-1
CARBON	0.03x	0.18x	0.04x
CHROME	17	17	35
NICKEL	12	10	<1.0
SILICON	2.5 max.	2.5	3.6
MOLYBDENUM	2.1	2.1	—
IRON	Balance	Balance	Balance

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MESH	MICRON	TYLER
10/20	(850-2000)	9/20
10/25	(710-2000)	9/24
20/30	(600-850)	20/28
20/35	(500-850)	20/32
20/40	(425-850)	20/30
25/50	(300-710)	24/48
30/40	(425-600)	28/35
30/45	(355-600)	28/42
30/50	(300-600)	28/48
30/60	(250-600)	28/60
35/45	(355-500)	32/42
40/60	(250-425)	35/60
45/60	(250-355)	42/60
40/80	(180-425)	35/80
50/80	(180-300)	48/80
60/80	(180-250)	60/80
50/100	(150-300)	48/100
70/100	(150-212)	65/100
80/120	(125-180)	80/120
100/140	(106-150)	100/150
100/170	(90-150)	100/170
100/200	(75-150)	100/200
140/200	(75-106)	150/200
170/325	(45-90)	170/325