Abrasion resistance for sugar fabrics

The filter media used in filter presses during sugar production play a critical role in the overall operational efficiency of the plant. Because these systems operate in demanding environments, filter fabrics must withstand ongoing abrasion and maintain consistent performance under harsh conditions.

This data sheet summarizes the performance testing and evaluation conducted for fabric samples PPD 3160 and NKD 11356 (New PA 12), with a focus on comparing their abrasion resistance and related material properties.



The following parameters were measured at different stages of the abrasion test:

→ Percentage abrasion loss
→ Air permeability [L/dm²min]
→ Thickness [mm]
→ Weight [g/m²]

PPD 3160

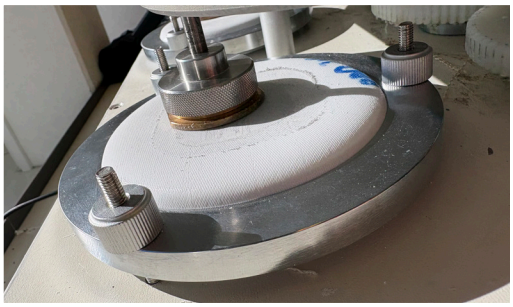


NKD 11356



Characteristic	PPD 3160	NKD 11356 (New PA 12)
Material	Polypropylene	Polyamide
Yarn	Monofilament	Monofilament
Weave	Satin (Atlas)	Satin (Atlas)
Weight [g/m²]	360	420
Thickness [mm]	0.61	0.56
Air Permeability [L/dm²min]	60	125

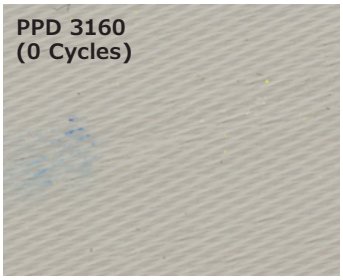




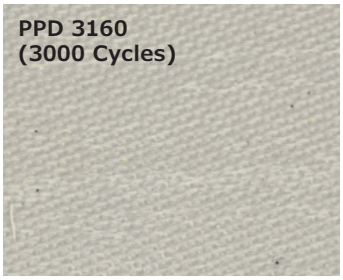


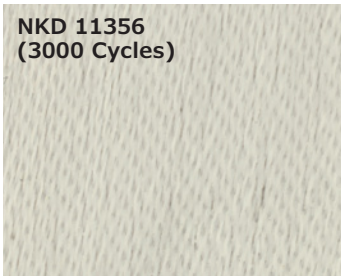


Characteristic	Cycles	PPD 3160	NKD 11356 (New PA 12)
Weight [g/m²]	0	349.52	423.51
	3000	341.45	414.74
	6000	317.12	406.42
	20000	52.35	343.74
Thickness [mm]	0	0.56	0.59
	3000	0.53	0.55
	6000	0.47	0.52
	20000	0.00	0.40
Air Permeability [L/dm²min]	0	82.70	122.50
	3000	51.60	53.25
	6000	25.45	42.25
	20000	5895	655

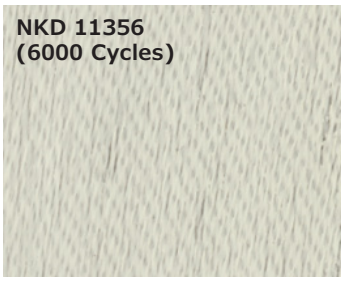












Summary:

PPD 3160

→ Weight remains largely constant throughout testing with only minor deviations until later cycles.

→ Thickness decreases steadily with increasing cycles.

→ Significant reduction of air permeability.

NKD 11356 (New PA 12)

→ Weight remains nearly constant throughout testing cycles.

→ Minimal decrease in thickness.

→ Maintains greater air permeability through increasing cycles.

Conclusion:

PPD 3160

→ Behaves consistently and remains structurally stable, despite reductions in thickness and permeability.

NKD 11356 (New PA 12)

→ Maintains higher air permeability overall, indicating a more open structure, though still affected by abrasion.