

# ASTERION<sup>®</sup>

## MICROFILAMENT CLEANROOM WIPE

PATENTED TECHNOLOGY FABRIC MADE OF **100% MICROFIBER** STRUCTURE



## ASTERION®

- Subsidiary company of Mogul, with focus on developing and marketing consumer products made of microfilament fabric Madaline®
- Mogul is a Turkish-based family-owned international nonwoven manufacturer, with 5 facilities in Gaziantep and Luleburgaz
- A top global 40 nonwoven company, with 130 million USD sales in 2020
- Asterion has a warehousing and converting capabilities in the center of Istanbul
- Major technologies; spunbond, spunlace, meltblown and composite
- Certified by ISO 9001, ISO 14001, OHSAS 18001, ISO 13485, ISO 22716 and ISO 5000



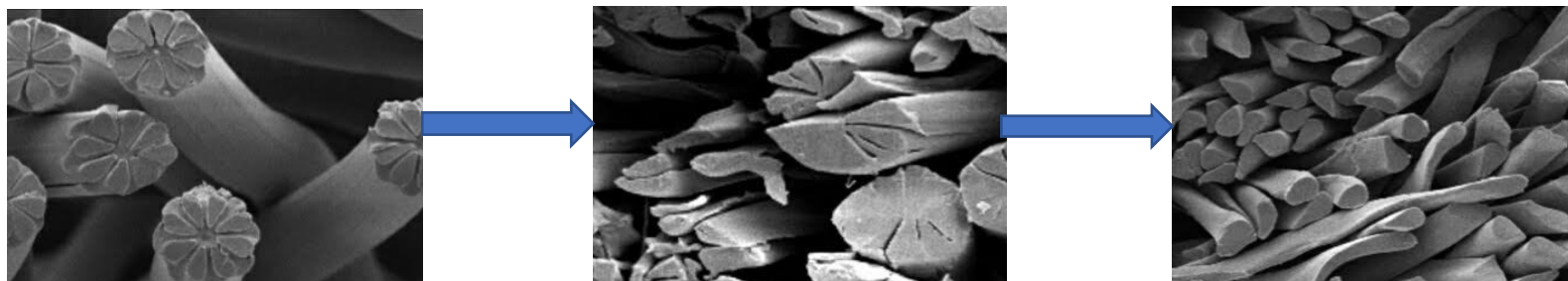
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## MADALINE® FABRIC TECHNOLOGY

- Mogul launched Madaline® fabric in new Luleburgaz facility in 2016
- US patented technology – Bi-component PET/PA6 microfilament hydro-entangled
- Microfilament size down to 0.2 denier, 100 times thinner than human hair
- Eco-friendly manufacturing process
  - One-pass process from polymer chips to fabric
  - Without adding binder, solvent, PVC, and finishes



### Splitting process of segmented-pie filament into microfilament



## MADALINE® FABRIC UNIQUE PROPERTIES

### COMES FROM THE MICROFILAMENT DENSE AND MICROPORE STRUCTURE

- Softness – microfilament nature
- Liquid/moisture management – Capillary action instantly absorbs water
- Quick drying – large internal surface area promotes drying process
- Durable and machine washable
- Non-linting – endless microfilament
- No fraying edge – hydro-entangled microfilament dense structure



# ASTERION® MICROFIBER PERFORMANCE CLEANING CLOTH

- High water absorption rate – microscope capillary effect and hydrophilic treatment  
2 – 3 times faster than terry towel and microfiber cloth
- Good water absorption capacity – 4 times of cloth weight
- Non-linting good for glass, stainless steel and high demand cleaning surface
- Continuous filament technology yields non-fraying edges
- Soft – good for delicate surface
- No scratch – no cloth edge sewing
- Smear free and streak-free
- Light weight – easy rinsing and water saving
- Low friction – reduce stress on hands and arms of cleaner
- Fast dry – energy and cost saving
- Cost effective – one pass manufacturing process from polymer to base fabric
- Highly resistant against chemicals (surfactant, disinfectants, etc.)
- Durable and machine washable
- Skin-friendly – No harmful chemicals added



# ASTERION® ADVANTAGES



	Asterion® Cloth
Cloth made of	Endless microfilament
PET/PA6 ratio	70%/30%
Water Absorbency rate	High
Linting	Extremely low linting
No scratch	Yes
Smear free	Yes
Streak free	Yes
Dry up time	High
Low friction	Yes
Light weight	Yes
Water and energy saving when washing	Yes
Fiber/filament finish	No
Manufacturing process	One pass



## ASTERION® CLEAN ROOM WIPE

- Convenient to use all in industrial applications
- With its endless microfilament structure, non-linting
- No harmful chemicals
- Multipurpose and Cost-Effective
- Absorbent Feature

"The Asterion® wipers are designed for HACCP standards, where non-lint and use of chemicals are required and to prevent food contamination incidents by ensuring the conveyors, quickly and effectively cleaned. "



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## CERTIFICATES & TESTS,

### LINTING IN THE DRY STATE

UN-EN ISO 9073 & UN-EN 13795;

Requirement:  $\leq 3,5$

Result: 2,44

According to the Aitex (Textile Research Institute)

Test number: 2017TM0753, our product is lint free and it has low contamination risk.

### RESULTS

#### LINTING IN THE DRY STATE\*

##### Standards

UNE-EN ISO 9073-10: 2005 ; UNE-EN 13795:2011+A1:2013

##### Number of specimens

5 each side

Reference: MADALINE PRODUCT

Side A and B

AVERAGE VALUES				
Periode	3 $\mu\text{m}$	5 $\mu\text{m}$	>10 $\mu\text{m}$	summation > 3 $\mu\text{m}$
1	66	4	1	73
2	90	7	1	97
3	101	4	0	105
4	101	3	0	104
5	96	3	0	100
6	99	3	0	101
7	103	2	0	105
8	96	3	0	99
9	95	2	0	97
10	97	2	0	100
Total	946	32	2	980
Total-Co	922	30	2	954
Standard deviation	158	16	1	173
CV	17	53	75	18
Particulate Matter Coefficient IPM	2,41	1,16	0,15	2,44
Coefficient off Linting $C_L$	2,96	1,48	0,23	2,98

##### Remark

Due to the requirements of the UNE-EN 13795:2011+A1:2013, the results obtained should be inside the values in the following table , based on the application of the product:

Table 1 and 2 - Characteristics for evaluation and performance requirements for surgical gowns and drapes

Parameters	Unit	Requirements			
		Standard Performance		High Performance	
		Critical area	less critical area	Critical area	less critical area
Cleanliness - Particulate matter	IPM	$\leq 3,5$	$\leq 3,5$	$\leq 3,5$	$\leq 3,5$
linting (particulate emissions)	Log <sub>10</sub> (pelusa contada)	$\leq 4,0$	$\leq 4,0$	$\leq 4,0$	$\leq 4,0$

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**THANKS FOR YOUR ATTENTION!**



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**MOGUL**  
Diversity in Nonwovens