'TORAY'

TORAYMICRON

Electret Nonwoven Fabric

Powerfully removes particles ranging from dirt and dust to microorganisms

TORAYMICRON, Toray's new micron-fiber electret* nonwoven fabric was developed through use of the company's advanced precision technology. The fiber is as fine as 2μm; in fact, a mere 1g of material can be formed into 350km of fiber. As a result of its electret characteristics, each fiber permanently retains electric energy, thus enabling the fabric to remove everything from invisible micron dust to large dirt particles. TORAYMICRON can be used to clean all spaces from high-tech plants to general households, fulfilling any clean space requirements through its advanced, multi-purpose functions.

**An electret, in contrast to the field of a magnetic body, is a solid dielectric possessing long-term electric polarization, thereby forming an electric field in the environment.*

Features

1. **Filtering capability**
   Electric energy enables TORAYMICRON to filter out micron dust particles in both air and oil.
2. **Adsorption property**
   Cigarette smoke and odors are efficiently adsorbed.
3. **Dust removal ability**
   Electric charges powerfully remove everything from micron particles to dirt.
4. **Self-adhesiveness**
   TORAYMICRON can adhere to virtually any material.
5. **Superior durability**
   TORAYMICRON features persistent, long-term electrical polarization.

Dust particles adhering to fiber

TORAYMICRON fiber *General fiber*

Typical Properties

Test method: JIS L-1085 (Thickness, tensile strength, tear strength)
JIS L-1069 (Porosity)
Test wind velocity: 1.5m/min (0.3μm polystyrene)

Property / Quality number	Thickness (mm)	Net weight (g/m²)	Tensile strength (kg/5cm)		Tensile elongation (%)		Tear strength (kg)		Collection efficiency (%)	Pressure drop (mmH₂O)
			MD*1	CD*2	MD*1	CD*2	MD*1	CD*2		
EM020	0.15	20	1.2	0.7	38	62	0.13	0.14	82	0.3
EW030	0.21	30	1.7	1.1	35	62	0.16	0.19	91	0.5
EM050	0.33	50	2.0	2.0	50	65	0.25	0.30	98	1.2
ES040	0.36	40	1.3	1.1	52	71	0.39	0.35	53	0.1

*1 MD: Machine Direction
*2 CD: Cross Direction

Applications

- Clean rooms where a dust-free environment is required. Also as air filters for use in electronic, precision, chemical and food industries.
- Air conditioning of buildings with cigarette smoke and odor removal requirements, and for air cleaners used in plants and offices.
- Masks for preventing entry of bacteria and pollen, as well as those for surgical, dental and industrial applications.
- Pure oil production and cleaning of machine insulating and discharge oils.
- Covers for precision equipment, audio equipment and personal computer keyboards.
- Wipers for dust removal from automobiles, showcases and office desks.

Available Sizes

	Width (cm)	Roll length (mm)
EM020	100	1500
EW030	100	1000
EM050	100	400
ES040	100	400

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High Efficiency with Low Pressure drop
"TORAYMICRON"

Standard size

Item / Style No.	(cm)	(m)
EM02010	126	1500
EW03110	126	1000
EM05010	126	400
ES04010	126	400
EC14048	123	250
EY1354A	123	250
MB150	120	About200
EP100	120	About300

Property of Toraymicron

Property / Style No.	Thickness (mm)	Weight (g/c m²)	Tensile strength (N/5 cm)		Elongation (%)		Tear strength (N)		Collection efficiency (%)	Pressure drop (Pa)
			MD	CD	MD	CD	MD	CD		
EM02010	0.17	20	8.9	8.0	33	52	1.08	1.12	87	5.9
EW03110	0.24	31	13.0	12.4	38	54	1.35	1.39	90	7.3
EM05010	0.37	50	20.0	18.3	33	60	2.58	2.47	99	12.5
ES04010	0.40	40	8.6	11.5	54	59	2.81	2.66	43	1.2
EC14048	1.07	140	43.7	27.5	36	96	9.77	9.44	71	2.5
EY1354A	0.95	135	54.5	25.7	26	68	5.63	7.54	88	6.7
MB150	0.93	150	84.3	71.6	57	90	7.94	9.71	※99.97	48.1
EP100	0.61	100	58.8	44.1	40	70	3.43	4.41	※※99.999	83.4

[Testing method] Physical property:JIS L 1906

Filtering property:Air velocity=1.5m/min,Particle size=0.3～0.5 μm(atmospheric dust)

※ 0.3 μm, ※※0.1 μm(polystylene latex)

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Filtration Performance of " TORAYMICRON "