



Tech-Micro Clean

Cleanroom Wipers

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Description

55% Woodpulp/45% Polyester Nonwoven Wipers Blend, 69 g/m² (Basis Weight) / >290 ml/m² (Sorptive capacity).

Applications

Ideally for cleanroom use since it doesn't contain binders or require chemical treatment. The high cleanliness and purity are ensured by low extractable level and ion content as well as extremely low particle generation by the material itself.

Features & Benefits

- Engineered for cleanroom use
- Absorbency of a natural fiber cloth, plus cleanliness and strength of a synthetic cloth
- No binders or chemical treatments used in manufacturing process
- Low extractable level and ion content
- Low particle generation
- Advanced package design eliminates the need to cut bags in the cleanroom
- Autoclave safe

Cleanroom Environment

- ISO Class 5 – 8
- Class 100 – 100,000
- EU Grade B – D

Shelf Life

- Non-Sterile (Dry) – 5 years from date of manufacture

Products

Number	Description	Packaging
TW-2290A-9	23x23cm (9"x9") dry	300 wipers/bag
TW-2290A-12	31x31 cm (12"x12") dry	150 wipers/bag

Physical/Performance Characteristics

Test Item	Test Standard/Tools/Unit	Specification
Color	White	White
Single weight	SOP-F105	69±10 g/m ²
Thickness	Thickness gauge	0.28±0.05 mm
Length	Steel rule	±10 mm
Width	Steel rule	±10 mm
Absorption (DIW)	IEST-RP-CC004.3\8.1	>290 mL/m ² <1S
LPC (>=0.5 µm)	Count/cm ²	<20000 (200x10 ⁶ /m ²)
APC (>=0.3 µm)	Count/ft ² /min	<6000 (60x10 ⁶ /m ²)
APC (>=0.5 µm)	Count/ft ² /min	<5000 (50x10 ⁶ /m ²)
APC (>=5.0 µm)	Count/ft ² /min	<500 (5x10 ⁶ /m ²)

Test Methods

A – "Evaluating Wiping Materials Used in Cleanroom and Other Controlled Environments," IEST-RP-CC004.3, Institute for Environmental Sciences and Technology, Rolling Meadows, IL, 2004; www.iest.org.

B – E2090-12, "Standard Test Method for Size-Differentiated Counting of Particles and Fibers Released from Cleanroom Wipers Using Optical and Scanning Electron Microscopy," ASTM International, West Conshohocken, PA, 2012; www.astm.org.

Industries Applications

Aerospace
Animal Laboratory
Biologics
Cleanroom Design/Build
Compounding Pharmacies
Data Storage
Facilities Maintenance
Industrial
Laboratory
Medical Device
Microelectronics
Pharmaceutical
Printing/Graphics
Semiconductor

ISO 14644-1 Clean Standards

	Class	Maximum Particles/m ³						FED STD 209E equivalent
		>=0.1 µm	>=0.2 µm	>=0.3 µm	>=0.5 µm	>=1 µm	>=5 µm	
LEAST STRINGENT	ISO 1	10	2					
	ISO 2	100	24	10	4			
	ISO 3	1,000	237	102	35	8		Class 1
	ISO 4	10,000	2,370	1,020	352	83		Class 10
	ISO 5	100,000	23,700	10,200	3,520	832	29	Class 100
MOST STRINGENT	ISO 6	1,000,000	237,000	102,000	35,200	8,320	293	Class 1,000
	ISO 7				352,000	83,200	2,930	Class 10,000
	ISO 8				3,520,000	832,000	29,300	Class 100,000
	ISO 9				35,200,000	8,320,000	293,000	Room Air

Minimum Apparel & Wipe Recommendations

		ISO 8 (Class 100,00)	ISO 7 Class (10,000)	ISO 6 (Class 1,000)	ISO 5 (Class 100)	ISO 4 (Class 10)
Beard Cover		✓	✓	✓	✓	✓
Face Mask					✓	✓
Booties				✓	✓	✓
Coverall				✓	✓	✓
Gloves				✓	✓	✓
Hair Cover		✓	✓	✓	✓	✓
Hood					✓	✓
Lab Coat		✓	✓			
Sealed Edge Wipes						✓
Polyester Knit Wipes					✓	
Poly/Cellulose Wipes		✓	✓	✓	✓	