



# Tech-Innovation

Cleanroom Wipers

## Tech-Innovation

### Description

Tech-Innovation is made from 100% polyester with a Sealed-Edge, 155 g/m<sup>2</sup> (Basis Weight) / >360 ml/m<sup>2</sup> (Sorptive capacity), cleanroom laundered.

### Applications

- Wiping and cleaning surfaces, equipment and parts.
- Spill control.
- Applying and removing lubricants, adhesives, residues and other solutions including disinfectants.
- Cleaning with solvents such as isopropyl alcohol (IPA), acetone, and degreasers.
- Cleaning gloves, notebooks, phones or any other item entering the cleanroom.
- Lining trays for holding, protecting, drying and storing of parts, equipment and devices.
- Appropriate for use with temperatures less than 400°F (205°C).

### Features & Benefits

- Constructed from 100% polyester creating a high absorbency wiper ideal for spill control, cleaning, and solution application.
- Cleanroom laundered and packaged providing ultra low levels of ions and non volatile residues.
- Designed for use on abrasive surfaces. This wiper will not easily snag or abrade releasing particles and fibers into the process or environment.
- Excellent chemical resistance for compatibility with a variety of solutions.
- Meets USP <797> and USP <800> wiper requirements.
- Autoclave safe (dry wipe).

### Cleanroom Environment

- ISO Class 4 – 8
- Class 10 – 100,000
- EU Grade A – D

### Shelf Life

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

### Products

Number	Description	Packaging
TW-2272A-9	23x23cm (9"x9") dry	150 wipers/bag
TW-2272A-12	31x31 cm (12"x12") dry	100 wipers/bag

### Physical/Performance Characteristics

Test Item	Test Standard/Tools/Unit	Specification
Color	White	White
Single weight	SOP-F105	155±10 g/m <sup>2</sup>
Thickness	Thickness gauge	0.60±0.05 mm
Length	Steel rule	±10 mm
Width	Steel rule	±10 mm
Absorption (DIW)	IEST-RP-CC004.3\8.1	>360 mL/m <sup>2</sup> <1S
LPC (>=0.5 µm)	Count/cm <sup>2</sup>	<8000 (80x10 <sup>6</sup> /m <sup>2</sup> )
APC (>=0.3 µm)	Count/ft <sup>2</sup> /min (MAX)	<3000 (30x10 <sup>6</sup> /m <sup>2</sup> )
APC (>=0.5 µm)	Count/ft <sup>2</sup> /min (MAX)	<2000 (20x10 <sup>6</sup> /m <sup>2</sup> )
APC (>=5.0 µm)	Count/ft <sup>2</sup> /min (MAX)	<200 (2x10 <sup>6</sup> /m <sup>2</sup> )

### 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](http://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](http://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 <sup>3</sup>						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		✓	✓	✓	✓	