

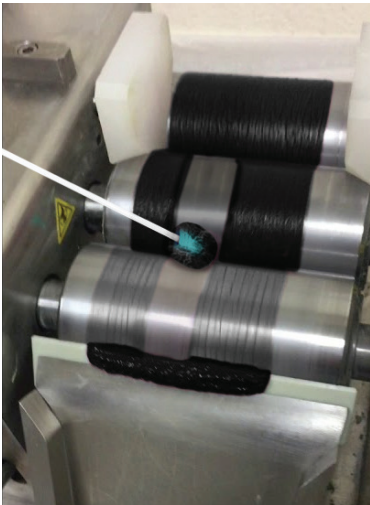


## SWABS

# Scratch-Free, Ergonomic Cleaning Tools for Microelectronics, Medical Device & Pharmaceutical Cleanrooms



ErgoSCRUB® Swab Tips can be detached to clean USP flexible hoses



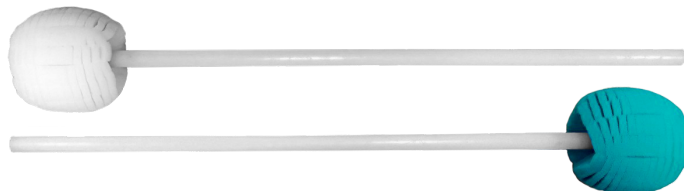
ErgoSCRUB® Swab Tips make possible for safe and fast cleaning of three roll mills



ErgoSCRUB® Swab with Sahara Scrubbing Foam Tip



ErgoSCRUB® Swab with UltraSORB+ Foam Tip



### Description

ErgoSCRUB® Swabs are designed to address cleaning applications that present ergonomic, operator safety, or cleaning accessibility issues in recessed areas. ErgoSCRUB® Swabs are constructed with replaceable Sahara® Scrubbing Foam or UltraSORB+ Foam Tips with reusable plastic handles. ErgoSCRUB® Swabs enable faster turnover time and scratch-free cleaning of expensive USP flexible hoses, tablet presses, tablet coating, three roll mills, and blending equipment. The scratch-free scrubbing properties of the Sahara® Scrubbing Foam and UltraSORB+ Foam enable the removal of sticky and hardened Active Pharmaceutical Ingredients(API) and excipient residues on scratch-sensitive equipment.

ErgoSCRUB® Swab tips have been designed to offer the cleaning performance of nylon brushes with stainless steel handles while eliminating metallic particle generation and scratch damage. The swabs provide full contact with hard to reach areas such as USP flexible hoses to deliver superior cleanliness results by dislodging, entrapping, and removing contamination. All ErgoSCRUB® Swabs are manufactured in an ISO 13485 cleanroom and are compatible with platinum-cured silicones. All components are tested and certified ISO 10993 bio-compatible.

### Applications & Benefits

- ErgoSCRUB® Swab Tips can be flushed through USP flexible hoses to improve cleaning validation performance of solid dose tablet and topical ointment manufacturing processes.
- Eliminate scratch damage and metallic particle generation when cleaning tablet presses, blenders, three roll mills and drug coating equipment that lead to cleaning validation failures.
- Enable faster, safer, and thorough cleaning of three roll mills and blending equipment used to process silicone elastomers and screen printable inks.
- Compatible with Detergents, IPA, Acetone, Xylene, and Toluene.
- Designed for ISO 5-8 equipment cleaning applications.



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**ErgoSCRUB® Swabs Vs. Nylon Brush with Stainless Steel Handle Comparison**



	ErgoSCRUB® Swabs	Nylon Brush With Stainless Steel Handle
Scratch-Free Cleaning	✓	
ISO 5 Cleanroom Processed and Washed	✓	
Manufactured from Low Particulate Generating Materials	✓	
Ability to Scrub Excess API Residue	✓	✓
Ability to Clean Precious Metal Paste	✓	
Ability to Remove Platinum Cured Silicones	✓	
Replaceable Tip & Reusable Handle	✓	
Designed to Clean Entire Length of USP Flexible Hose	✓	
Flexible to Conform to Surfaces	✓	✓
Available in Cleanroom Wiper Form	✓	



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### Technical Data | Sahara Scrubbing Foam

#### Physical Specifications

Particle Generation <sup>1</sup>	Tensile	Tear	NVR (DI Water)
<800	>30PSI	>3PSI	<100 µg/g

<sup>1</sup> Via Biaxial Shake LPC Test Particles ≥ 0.5µm/cm<sup>2</sup>

### Technical Data | UltraSORB® + Hydrophilic Foam

Physical Properties	Units	Specification		Test Method
		Min	Max	
Pore Size (Microscope)	ppi	70	80	WI-QA-22
Density	lb/ft <sup>3</sup>	1.70	2.10	ASTM D3574 / WI-QA-01
CLD @ 25% R	psi	0.65	1.00	ASTM D3574 / WI-QA-10

Disclaimer: Above are typical test results that are subject to change, not specifications.

UltraSORB+		
Test Parameter(s)	UltraSORB+	Specification
LPC ≥ 0.5µm (particles/cm <sup>2</sup> )	940	< 3,000 particles/cm <sup>2</sup>
<b>NVR (µg/g)</b>		
In DI Water	92	< 400 ug/g

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## SWABS

### Ordering Information

Picture	Part No.	Description	Size
	GS4872ES-HM	1.8" ErgoSCRUB Swab with Sahara® Foam and Zinc Plated Steel Socket Screw	45mm(OD) x 60mm(L)
	HS4872QES-HM	1.8" ErgoSCRUB Swab with UltraSORB+ Foam and Zinc Plated Steel Socket Screw	45mm(OD) x 60mm(L)
	GS4873ES-HM	3" ErgoSCRUB Swab with Sahara® Foam and Zinc Plated Steel Socket Screw	75mm(OD) x 70mm(L)
	HS4873QES-HM	3" ErgoSCRUB Swab with UltraSORB+ Foam and Zinc Plated Steel Socket Screw	75mm(OD) x 70mm(L)
	GS4873ES-H	3" ErgoSCRUB Swab with Sahara® Foam and Nylon Hex Socket Screw	75mm(OD) x 70mm(L)
	HS4873QES-H	3" ErgoSCRUB Swab with UltraSORB+ Foam and Nylon Hex Socket Screw	75mm(OD) x 70mm(L)
	GS4876ES-H	6" ErgoSCRUB Swab with Sahara® Foam and Nylon Hex Socket Screw	152mm (OD) x 70mm (L)
	HS4876QES-H	6" ErgoSCRUB Swab with UltraSORB+ Foam and Nylon Hex Socket Screw	152mm (OD) x 70mm (L)
	HTHANDLE42	POM White Handle - Designed to be used with Nylon Hex Socket Screw	0.49" (OD) x 20" (L)
	HT4500-HARDWARE1	Socket + Hose for Cleaning USP Flexible Hoses Internal Diameter - 2.5m - Designed to be used with Zinc Plated Steel Socket Screw	2.5m
	HT4500-HARDWARE2	Socket + Hose for Cleaning USP Flexible Hoses Internal Diameter - 5.5m - Designed to be used with Zinc Plated Steel Socket Screw	5.5m



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