SONIT™ HD-M

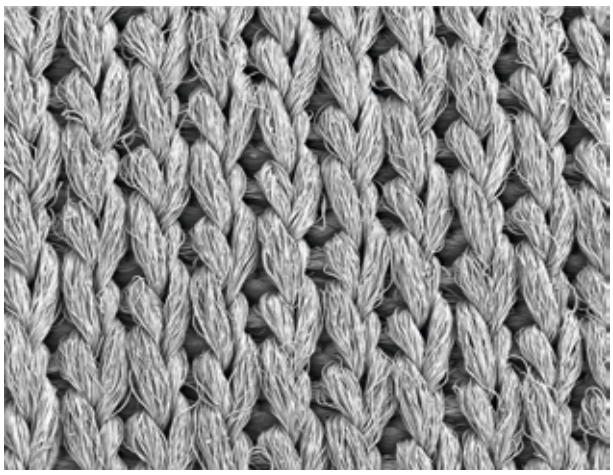
Datasheet - March 2016

Knit wiper for higher performance requirements

The HD-M wiper described below belongs to our SONIT™ product line of high-tech wipers. It has a cleaning efficiency one cleanroom classification higher than MD-M wipers. Here a special combination of microfilament yarns is used to increase cleaning efficiency. The specially constructed characteristics of the yarns and their arrangement in the textile lead to an increase of liquid absorption per time unit. In this way, they enable comparatively faster cleaning and less liquid residues left on the surfaces after cleaning. The edges of this cloth are laser-cut and thermally consolidated on all four sides, a process which at the same time seals the particles and fibre fragments in the edge area. For precision cleaning of structured surfaces, SONIT™ HD-M is the product of choice. The high degree of cleanness of this wiper – also due to its low content of selected ions – makes it a leading product for device and equipment cleaning in the semiconductor industry.

Characteristics	
knitware form microfilamentyarn	
flat packed	
Features	
extendet cleaning efficiency	
low fluid residue after wiping	
Application	
for precision cleaning on all surfaces and equipment in the semiconductor industrie	
General technical specification	
textile construction	knitware
Mesh density per cm²	484
Cutting	laser
Treatment	nonionic surfactant
pre-washed	yes
washable	possible

The image on the right taken with our scanning electron microscope clearly shows the fineness of the yarn used to make this knitted wiper. The cloth is close-meshed, which makes it especially suitable for picking up small-dimensioned particles. Polyester yarns have a high tensile strength even in these small diameters, so that fibre breakage during cleaning work is rare in comparison to wiping cloths consisting partly of cellulose or viscose. This knitted wiper clings closely to the topography of the machine or technical surfaces, enabling efficient precision cleaning in relatively little time.



SEM Image Yuko Labuda - 30x

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SONIT ™ HD-M

General Technical Data	Value	Unit	After Method
Mechanical Parameters			
Thickness	0.60	mm	ISO 9073-2
Surface weight	185	g/m²	ISO 9073-1
Break load dry, longitudinal direction	424	N	ISO 9073-3
Break load dry, lateral direction	460	N	ISO 9073-3
Elongation at break, longitudinal direction	86.2	mm	ISO 9073-3
Elongation at break, lateral direction	117.5	mm	ISO 9073-3
Particle Release Data			
Cleaning efficiency after Labuda	96	%	C&C-W-RE
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 5 µm	3.0	k-Part/cm²	C&C-W-PF-S
Particle residue (Particle > 39 µm) after wiping on surface Rz 39 µm	6.8	k-Part/cm²	C&C-W-PF-S
Air particle release (at 40% relH) by Labuda Fulling Simulator Mk1	659	Part 0.3 µm/min	
Cleanroom class according to ISO 14644-1	Cleanroom Consumables can not be specified for air purity classes.		
Water Absorption (DI water)			
Total	410	g/m²	
Average absorption rate in 5 s	0.27	g	C&C-W-AK-R
Average absorption rate in 60 s	0.47	g	C&C-W-AK-R
Drop absorption time	0.11	s	C&C-W-EZ
Liquid residue after wet wiping	0.97	%	C&C-W-RF
Chemical Resistance Charge of break-load (long) after 2.5 min immersion into various solvents			
Dry	424	N	C&C-W-CF
Water	-4	%	C&C-W-CF
Isopropyl	11	%	C&C-W-CF
Acetone	5	%	C&C-W-CF
Triboelectricity			
Triboelectric charge	4.8	kV	CC-W-TE (Chubb-Method)
Decay time	232	s	CC-W-TE (Chubb-Method)
Ions			
Calcium ions	< 1	ppb	
Chloride ions	1	ppb	
Fluoride ions	< 1	ppb	
Potassium ions	< 1	ppb	
Sodium ions	< 1	ppb	
Quality monitoring parameters (Measurements per delivery)			
Drop absorption time in ms		%	
Particle release after immersion method (> 0,2 µm Particle)		%	
Mesh number, longitudinal direction		%	
Mesh number, lateral direction		%	

SONIT ™ HD-M

Order and Packing Information							
Type	Dimensions in cm	Folding	Content pcs / pack	Packs per carton	Pieces per carton	Weight per carton in kg	Dimensions p. carton in cm
CC 145 J	10 x 10	bulk pack	200	15	3000	6.5	50 x 30 x 30
CC 146 P	23 x 23	bulk pack	50	30	1500	15.0	60 x 40 x 33
CC 147 P	40 x 40	flat pack	50	5	250	8.0	50 x 30 x 30

Order and Packing Information / Meisterboxen							
Type	Dimensions in cm	Folding	Content pcs / pack	Packs per carton	Pieces per carton	Weight per carton in kg	Dimensions p. carton in cm
CC 6446-03	23 x 23	bulk pack	50	4	200	3.5	48 x 28 x 29

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