

Knit wiper for higher performance requirements

Made in Germany

Precision cleaning wipers for critical applications are usually made of knitted fabric of polymer multifilament yarn. The number and diameter of the single fibrils of these yarns are precisely calculated and balanced to match the cleaning purpose. The cleaning effectiveness of these high-tech wiping cloths depends on their mesh number and mesh width and also on the binding character of the knitted fabric. The SONIT[®]-MDM wiper is the basic product of the SONIT[®]-product line. SONIT[®]-precision wiping cloths are made of carefully decontaminated close-meshed knitted fabric using thin standard yarns. The edges of the wipers are laser-cut and thermally consolidated, procedures which considerably reduce the number of released particles and fibres. The laser-cut edge is only 0.5 mm thick. The wiper therefore does not have the disadvantage of products with wide, thermo-bonded edges which can scratch sensitive surfaces or cause groove marks. SONIT[®]-MDM wiping cloths are suitable for critical tasks when cleaning equipment and devices and for all cleaning tasks where only a small amount of particle residue may be left on the surface.

The image on the right, taken with our scanning electron microscope, shows the soft open structure of this loosely knitted standard cloth. The yarn thickness of which is lower than that of some nonwoven wipers. Due to the application-defined quantity and spatial extent of its cavities, this cloth exhibits outstanding capillary water absorption per time unit. The combination of these characteristics makes SONIT[®]-MDM a valuable precision cloth for exacting requirements. Its use is recommended for applications where as little content of the wiper as possible may remain on the cleaned surface.

Characteristics

knitware from microfilament yarn, flat packs and bulk packs

Features

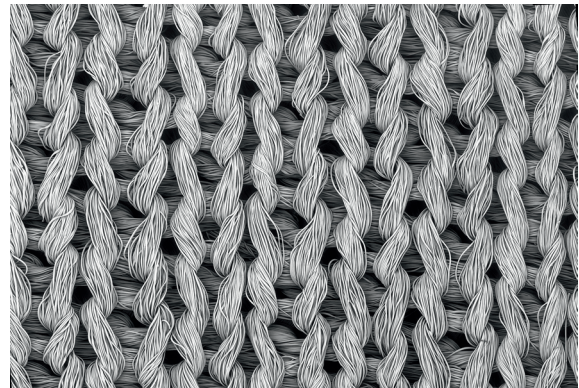
multiple decontamination, lasercutted edges

Application

for critical tasks in equipment cleaning for all cleaning, processes which require low particle residue

General technical specification

Textile construction	knitware
Mesh / cm ²	370
Cutting	laser beam
Possible decontamination	nonionic surfactant
Decontaminated	yes
Washable	not recommended
Sterilisable	possible
Stat. Quality control	yes



SEM photo Yuko Labuda, image height 3 mm

General technical data

Mechanical parameters	Value	Unit	After method
Thickness	0.52	mm	ISO 9073-2
Surface weight	147	g/m ²	ISO 9073-1
Break load dry, longitudinal direction	259	N	ISO 9073-3
Break load dry, lateral direction	456	N	ISO 9073-3
Elongation at break, longitudinal direction	90	mm	ISO 9073-3
Elongation at break, lateral direction	83	mm	ISO 9073-3

Particle release data	Value	Unit	After method
Labuda-Cleaning efficacy based on oil film MULTIDRAW KTL N 16	70.2	%	C&C-W-RE
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 5 µm	4	k-Part/cm ²	C&C-W-PF-S
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 39 µm	8	k-Part/cm ²	C&C-W-PF-S
Air particle release (at 40% relH) by Labuda Fulling Simulator Mk1	307	Part 0.5 µm/ min	
Cleanroom class according to ISO 14644-1	Cleanroom consumables cannot be specified for air purity classes (see VDI 2083 - sheet 9.2).		

Water absorption (DI water)	Value	Unit	After method
Total	302.7	g/m ²	
Average absorption rate in 5 s	0.31	g	C&C-W-AK-R
Average absorption rate in 60 s	0.47	g	C&C-W-AK-R
Drop absorption time	992	ms	C&C-W-EZ
DI-Water after wet wiping	11	%	C&C-W-RF

Chemical resistance	Value	Unit	After method
Charge of break-load (long) after 2.5 min immersion into various solvents			
Dry	259	N	C&C-W-CF
Water	+9	%	C&C-W-CF
Isopropyl	+15	%	C&C-W-CF
Acetone	+17	%	C&C-W-CF

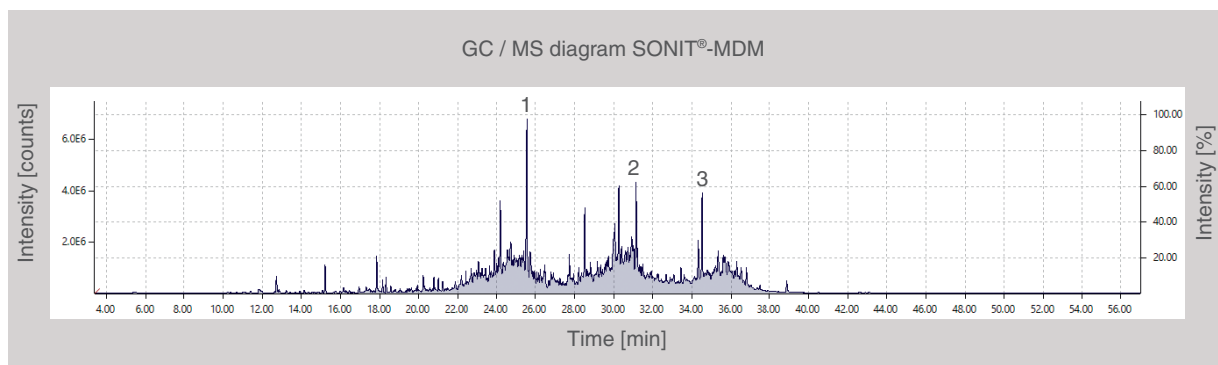
Triboelectricity at 40% relH and room temperature	Value	Unit	After method
Discharge after 60 s	11.2	%	CC-W-TE

Anion and cation inventory in ppm measurement with capillary electrophoresis

Chloride	Fluoride	Nitrate	Nitrite	Phosphate	Sulphate		
0.06	0.13	0.25	0.03	0.08	0.03		
Ammonium	Barium	Calcium	Potassium	Lithium	Magnesium	Sodium	Strontium
0.04	-	0.114	0.093	-	-	0.084	-

All data in this sheet are based on measurements taken at the time of their issuance. The publication of this document does not constitute a guarantee for the continued compliance with these data. On request, you will receive current data and tolerance limits from our laboratory. Subject to change without prior notice. Errors and omissions excepted. Clear & Clean is a company certified according to the EN ISO 9001 : 2015 standard. The quality assurance measures are described in our quality manual. When the data contained in this data sheet are changed, no automatic alteration is made. Clean room consumable products cannot be classified according to a clean room class for air purity according to ISO-14644-1.

SONIT® is a registered European Union trademark (No. 018305462) of Clear & Clean Werk für Reintechnik GmbH in Lübeck.



Outgassing at 90 ° C. 1: dodecanol 2: lauryl ethoxylate 3: hexadecano

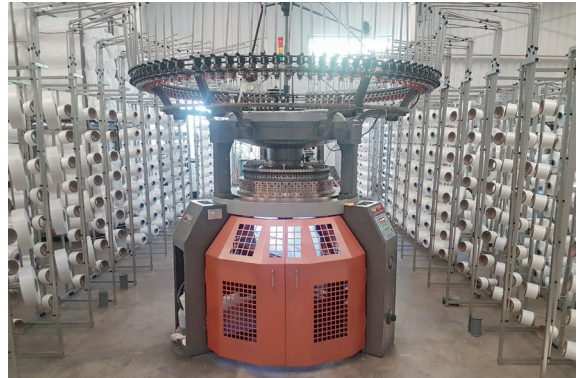
Order and packing information / single packs SONIT®-MDM

Type	Dimensions in cm	Folding	Content pcs / pack	Packs per carton	Pieces per carton	Weight per carton in kg	Dimensions p. carton in cm
CC165	10 x 10	bulk pack	200	15	3000	5.5	50 x 30 x 30
CC166	23 x 23	bulk pack	50	30	1500	12.5	60 x 40 x 33
CC167	40 x 40	flat pack	50	5	250	6.5	50 x 30 x 30

From yarn to hi-tech cleaning wipers



knitted multifilament yarn as roll goods



an industrial knitting machine



our laser formatting for knit wipers



Example: our aquatic decontamination



our visual inspection and packaging in the ISO 5 clean room



Example: cleaning optical components