

Ultra-dense micro-knit for cleaning smooth surfaces

This wiping cloth is knitted on a circular knitting machine using bicomponent filament yarn. The single fibrils are so thin that 1000 km of them weigh only 12.5 g. Next, following the knitting, the material is shrunk by about 40% in a chemical process. The result is an extremely dense cloth with outstanding cleaning efficiency. After the shrinking process, this extraordinary material has a density of approximately 13 000 filaments per cm². The MICROWEB™ UDG wiper is mainly used for the time-saving, residue-free removal of thin layers of grease from glass and ultra-polished surfaces. The wiper can also remove submicron particles from such surfaces. Although in its unwashed state the wiping cloth contains relatively few particles, it may be submitted to a decontamination process to meet extremely high standards of cleanness. Due to laser-based formatting, the surfaces and edges are in a state of equilibrium in purity.

This image taken with our scanning electron microscope distinctly reveals the extremely high fibre density of this top-quality knitted fabric. The bicomponent yarn with the orange profile consists of a polyamide matrix with embedded polyester segments. Next, in a chemical process, the polyamide and the polyester segments are separated from each other. The result is a multifilament yarn in which each single filament has several fibrils. Because the “feel” of the textile is determined by the amount of polyester used, the fabricated textile has a silky character with a surface density unmatched by textiles with other materials.

Characteristics

knitware from bicomponent filaments, lasercutted edges

Features

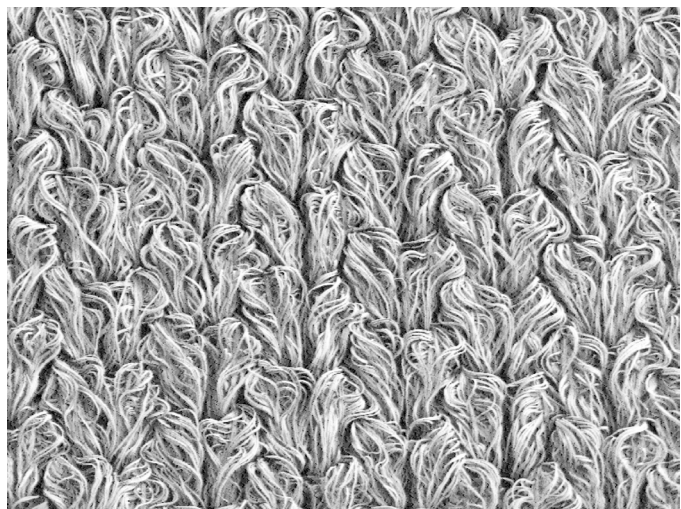
outstanding cleaning efficiency, low particle release

Application

as a precision wiper for smooth and polished surfaces like prisma, lenses and mirrors made from glass or metal

General technical specification

Textile construction	knitware
Mesh / cm ²	1056
Cutting	laser
Treatment	surfactant
Decontaminated	no
Washable	possible
Sterilisable	possible
Stat. Quality control	yes



1 mm

SEM Image Yuko Labuda

General technical data			
Mechanical parameters	Value	Unit	After method
Thickness	0.33	mm	ISO 9073-2
Surface weight	151	g/m ²	ISO 9073-1
Break load dry, longitudinal direction	485	N	ISO 9073-3
Break load dry, lateral direction	213	N	ISO 9073-3
Elongation at break, longitudinal direction	99	mm	ISO 9073-3
Elongation at break, lateral direction	171	mm	ISO 9073-3
Particle release data	Value	Unit	After method
Cleaning efficiency after Labuda measured with MULTIDRAW KTL N 16 oil	93.8	%	C&C-W-RE
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 5 µm	3.52	k-Part/cm ²	C&C-W-PF-S
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 39 µm	6.4	k-Part/cm ²	C&C-W-PF-S
Air particle release (at 40% relH) by Labuda Fulling Simulator Mk1	104	Part 0.5 µm/ min	
Cleanroom class according to ISO 14644-1	Cleanroom consumables cannot be specified for air purity classes		
Water absorption (DI water)	Value	Unit	After method
Total	236.8	g/m ²	
Average absorption rate in 5 s	0.07	g	C&C-W-AK-R
Average absorption rate in 60 s	0.2	g	C&C-W-AK-R
Drop absorption time	15550	ms	C&C-W-EZ
Liquid residue after wet wiping	82	%	C&C-W-RF
Chemical resistance	Value	Unit	After method
Charge of break-load (long) after 2.5 min immersion into various solvents			
Dry	485	N	C&C-W-CF
Water	-13	%	C&C-W-CF
Isopropyl	+3	%	C&C-W-CF
Acetone	-5	%	C&C-W-CF

Triboelectricity at 40% relH and room temperature	Value	Unit	After method
Charge at 17 s	57.7	kV/m	CC-W-TE
Charge at 17 s at 60 s	49.3	kV/m	CC-W-TE
Discharge after 60 s	14.7	%	CC-W-TE

Anion and cation inventory in ppm measurement with capillary electrophoresis

Chloride	Fluoride	Nitrate	Nitrite	Phosphate	Sulphate		
0.554	0.369	0.072	-	0.032	0.463		
Ammonium	Barium	Calcium	Potassium	Lithium	Magnesium	Sodium	Strontium
0.136	-	0.354	0.119	-	-	4.526	-

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Order and packing information / single packs MICROWEB™ UDG

Type	Dimensions in cm	Folding	Content pcs / pack	Packs per carton	Pieces per carton	Weight per carton in kg	Dimensions p. carton in cm
CC133D-I	10 x 10	bulk pack	320	15	4800	9.0	50 x 30 x 30
CC134D-I	25 x 25	flat pack	80	15	1200	13.0	50 x 30 x 30
CC135D-I	20 x 20	flat pack	80	20	1600	11.0	50 x 50 x 30
CC137P-I	40 x 40	flat pack	50	10	500	14.5	51 x 51 x 22

Order and packing information / special formats in roll form MICROWEB™ UDG

Type	Roll width in cm	Running length in m	Core diameter in mm	Rolls per carton	Weight per roll in kg	Dimensions p. carton in cm
CC129RL	6	50		1		