

Ultra-clean micro-knit for cleaning smooth surfaces

Made in Germany

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 extra-ordinarily high cleaning effectiveness. The MICROWEB® UDG EC is cut out of the roll of knitted material with a pulsed CO₂ laser. After a multi-step decontamination process the wiper can also be used in cleaning to meet higher cleanroom classification standards. The high cleaning effectiveness ensures the removal of very thin layers of grease on glass, mirrors and other polished surfaces, leaving very little residue. The decontamination process improves the cleaning effectiveness and reduces the quantity of particles released by the cloth. With this wiping cloth, even submicron particles can be removed from smooth surfaces. Due to the laser-based separation procedure, the sealed edges of the cloth are protected from damage during the washing process. Thus, equilibrium of purity between the surfaces and the edges is achieved.

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 filament has several fibrils. Because the grip 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, extra decontaminated for highest requirements

Features

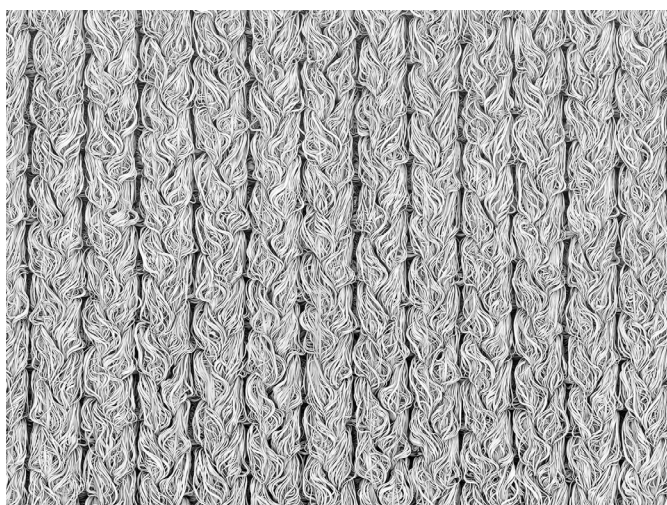
highest cleaning effectiveness, low particle release

Application

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

General technical specification

Textile construction	knitware
Mesh / cm ²	1100
Cutting	laser beam
Treatment	none
Decontaminated	yes
Washable	yes
Sterilisable	yes
Stat. Quality control	yes



SEM photo Yuko Labuda, image width 3 mm

General technical data			
Mechanical parameters	Value	Unit	After method
Thickness	0.4	mm	ISO 9073-2
Surface weight	168	g/m ²	ISO 9073-1
Break load dry, longitudinal direction	441	N	ISO 9073-3
Break load dry, lateral direction	188	N	ISO 9073-3
Elongation at break, longitudinal direction	106	mm	ISO 9073-3
Elongation at break, lateral direction	172	mm	ISO 9073-3
Particle release data	Value	Unit	After method
Labuda-Cleaning efficacy based on oil film MULTIDRAW KTL N 16	94.1	%	C&C-W-RE
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 5 µm	2.8	k-Part/cm ²	C&C-W-PF-S
Particle residue (Particle > 0.5 µm) after wiping on surface Rz 39 µm	4.3	k-Part/cm ²	C&C-W-PF-S
Air particle release (at 40% relH) by Labuda Filling Simulator Mk1	151	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	242.6	g/m ²	
Average absorption rate in 5 s	0.17	g	C&C-W-AK-R
Average absorption rate in 60 s	0.29	g	C&C-W-AK-R
Drop absorption time	> 999	ms	C&C-W-EZ
DI-Water after wet wiping	75	%	C&C-W-RF
Chemical resistance	Value	Unit	After method
Charge of break-load (long) after 2.5 min immersion into various solvents			
Dry	441	N	C&C-W-CF
Water	-9	%	C&C-W-CF
Isopropyl	-2	%	C&C-W-CF
Acetone	0	%	C&C-W-CF

Triboelectricity at 40% relH and room temperature	Value	Unit	After method
Discharge after 60 s	8.9	%	CC-W-TE

Anion and cation inventory in ppm measurement with capillary electrophoresis

Chloride	Fluoride	Nitrate	Nitrite	Phosphate	Sulphate		
0.061	0.214	0.075	-	0.047	-		
Ammonium	Barium	Calcium	Potassium	Lithium	Magnesium	Sodium	Strontium
0.154	-	3.896	0.222	-	0.405	1.113	-

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.

Order and packing information / single packs MICROWEB® UDG-EC

Type	Dimensions in cm	Folding	Content pcs / pack	Packs per carton	Pieces per carton	Weight per carton in kg	Dimensions p. carton in cm
CC133EC	10 x 10	bulk pack	320	15	4800	9.0	50 x 30 x 30
CC134EC	25 x 25	flat pack	80	15	1200	13.0	50 x 30 x 30
CC135EC	20 x 20	flat pack	80	20	1600	11.0	50 x 50 x 30
CC137EC	40 x 40	flat pack	50	10	500	14.5	51 x 51 x 22