



# VALMEX<sup>®</sup> MEHATOP<sup>®</sup> N

PREMIUM TEXTILES FOR  
PERMANENT STRUCTURES



## From MEGA to NANO

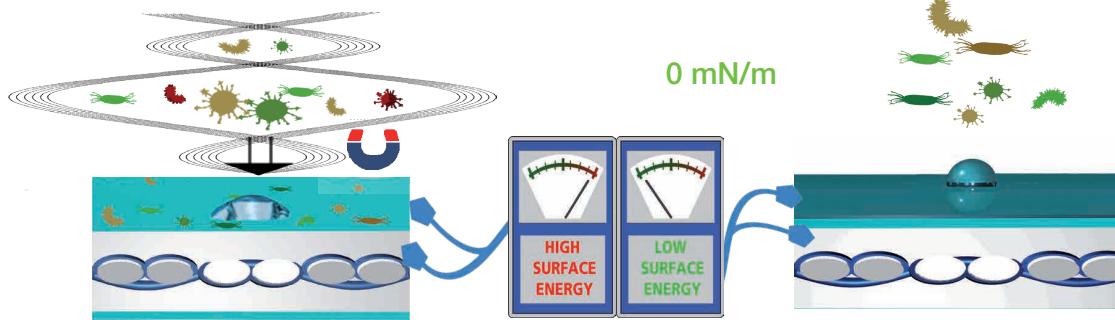
“The magic is in the details”, as Theodor Fontane wrote in 1893. When producing membranes for mega projects like stadiums or shopping malls, it is vital for even the tiniest detail to be built to the highest quality standards. In order to guarantee optimal quality we took Mr. Fontane’s saying to heart and enhanced the

nanostructure of our lacquering, the tiniest detail of our membranes.

In difference to the phrase, however, the self-cleaning structure has little to do with magic: it’s science, long hours of research and we’ve called it: MEHATOP® N

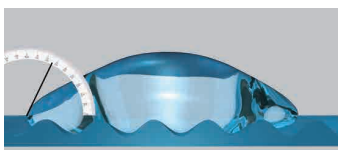
### Non PVDF lacquered surface

### MEHATOP® N lacquered surface



We adopted the principle of MEHATOP® N lacquering from natural role models. Many plants use their evolutionary, unique surface characteristics to protect their structure from environmental forces like fungi or algae growth. The surface of MEHATOP® N treated membranes is designed in a similar way.

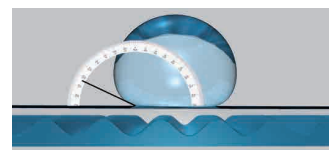
A special nanostructure minimises surface energy. The unique outcome of low surface energy is a significant reduction in the adhesive power of the surface when it comes to other molecules with higher surface energy such as water, dirt or dust.



Low Droplet Angle

The low adhesive power towards disperse and polar liquid molecules is the best demonstration of this effect. Materials with low surface energy do not attract a drop of liquid as strongly as materials with high surface energy. Therefore the droplet form

100°



High Droplet Angle

is more stable. This effect is called hydrophobia, and it is measured using the droplet angle test. A higher droplet angle indicates stronger hydrophobic capacity, which results in better self-cleaning capacity of the surface.

To sum it up concisely:

**Low Surface Energy = Big Droplet Angle = Low Adhesion Power = MEHATOP® N lacquered surface =**

- Conserve the appearance of your design
- Dirt and dust repellent
- Pollutant resistant
- Hydrophobic (pearl effect)
- High self-cleaning quality
- Saves on maintenance costs
- Enhanced colour stability
- Low friction capabilities
- Insulating characteristics
- 20 year warranty



## VALMEX®

Product No.

FR 700 Type I  
7205 5256

FR 900 Type II  
7211 5256

FR 1000 Type III  
7269 5256

FR 1400 Type IV  
7270 5256

FR 1600 Type V  
7274 5256

	Measurement methods/ Classifications	Unit	FR 700 Type I 7205 5256	FR 900 Type II 7211 5256	FR 1000 Type III 7269 5256	FR 1400 Type IV 7270 5256	FR 1600 Type V 7274 5256
<b>Material composition</b>							
Finish	Nanopolymerized fluorinated lacquer system on both sides, protected against microbial and fungal attack, UV-protected, Titaniumdioxide (TiO <sub>2</sub> ) front side primer						
Base fabric	DIN ISO 2076		Polyester Plain Weave L1/1	Polyester Panama Weave P 2/2	Polyester Panama Weave P 2/2	Polyester Panama Weave P 3/3	Polyester Panama Weave P 3/4
Yarn count	DIN ISO 2060	dtex	1100	1100	1670	1670	2200
Low-wick yarn treatment	Methylen blue liquid method	mm	< 5	< 5	< 5	< 5	< 5
Total weight	EN ISO 2286-2	g/m <sup>2</sup>	700	900	1050	1350	1550
Fabric thickness		mm	0.6	0.8	0.9	1.1	1.3
CMD ratio (Front:Back)			3:2	3:2	3:2	3:2	3:2
<b>Mechanical properties</b>							
Tensile strength (warp/weft)	DIN EN ISO 1421/V1	N/50 mm	3000 / 3000	4300 / 4200	6000 / 5500	8000 / 7000	10000 / 9000
Elongation at break (warp/weft)	DIN EN ISO 1421/V1	%	22 / 30	23 / 29	24 / 32	24 / 33	27 / 29
Tear strength (warp/weft)	DIN 53363	N	300 / 300	500 / 500	900 / 800	1200 / 1200	2000 / 2000
Adhesion	PA 09.03	N/cm	20	25	25	26	30
Crack resistance	DIN 53359 A	No. of folding	100,000 T - no cracks	100,000 T - no cracks	100,000 T - no cracks	100,000 T - no cracks	100,000 T - no cracks
<b>Physical properties</b>							
Light fastness	DIN EN ISO 105 B02		> 6	> 6	> 6	> 6	> 6
Cold resistance	DIN EN 1876-1	°C	-40	-40	-40	-40	-40
Heat resistance	PA 07.04	°C	+70	+70	+70	+70	+70
Fire resistance	Classification		DIN 4102-1:B1 EN 13501-1:B S2 D0 UNI 9177:CL2 NFP 92507:M2 BS 7837 California T19 SIS 650082 ASTM E84 Class A	DIN 4102-1:B1 EN 13501-1:B S2 D0 UNI 9177:CL2 NFP 92507:M2 BS 7837 California T19 GOST: G1 NFPA 701 TEST 2 AS 1530 part 2 AS 1530 part 3 ASTM E84 Class A	DIN 4102-1:B1 EN 13501-1:B S2 D0 UNI 9177:CL2 BS 7837 California T19 NFPA 701 Test 2	DIN 4102-1:B1 EN 13501-1:B S3 D0 UNI 9177:CL2 BS 7837 California T19	DIN 4102-1:B1 EN 13501-1:B S2 D0 BS 7837 California T19
Standard roll width	cm		250			on request: 300 cm	
Warranty	20 years						

Quality and environment Manufactured in Germany under the internationally recognized standard of quality **DIN 9001** and **DIN 50001** for energy management.

These indicated technical data are based on average results. Due to production procedures slight deviations can occur. All technical data are in accordance with the present standard of knowledge and give product information without legal binding. All data apply to new products. All values are generated according to standards at established laboratories. Results may vary if executed at different laboratories or due to different standard interpretations. Applications suggested here do not release the customer from testing material for its intended application.



VALMEX® FR 1000 MEHATOP® N, Type III (7269 5256 958958)



Our new VALMEX® MEHATOP® N membranes were developed on the strength of more than 60 years of experience with fabrics. Dust, dirt and other environmental influences cannot attach themselves to our newly developed VALMEX® MEHATOP® N lacquer, and are rinsed off with ease - or by the next rain.

The result is a smooth finish to the surface of your architectural design, which will stay in mint condition. We know just how good our new innovation is, and we grant a 20 year warranty on all Mehler Technologies membranes lacquered with MEHATOP® N.

## MEHATOP® N

... accepts the challenges of:

- Areas with high humidity
- High polluted cities
- Sophisticated designs
- Demanding builder-owners
- Stable appearance



Glued by the impressively committed employees of the sheltered workshop



### ...More Experience!

Mehler Technologies is your reliable partner for tensile architecture applications. 60 years of experience in textile industry have shaped a huge knowledgebase with an incomparable know-how advantage.

Mehler Technologies would like you to enjoy the benefits. Please expect more from us and get in touch with one of our representatives.

[Let us assist you with your next project.](#)

### ...More Sustainability!



The Mehler eco-care concept accompanies Mehler products throughout their entire lifecycle, including the incorporation of ecological criteria in the selection of raw materials and the use of environmentally friendly production processes.



Registration, Evaluation and Authorisation of Chemicals

Mehler Technologies strictly selects all product components in conjunction with the most stringent EU directives and is fulfilling them as a pioneer in this industry.



Mehler Technologies honours its commitment to environmental responsibility and sustainability by participating in VinylPlus: The voluntary commitment of the PVC industry.



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