



VALMEX® MEHATOP® N

PREMIUM TEXTILES FOR
PERMANENT STRUCTURES

TEXTILES TO TRANSFORM



From MEGA to NANO

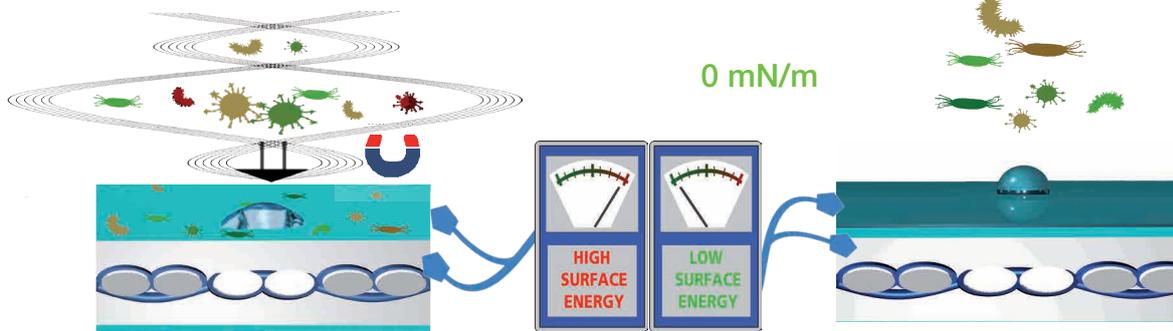
“The magic is in the details”, as Theodor Fontane wrote in 1893. When producing membranes for mega projects like stadiums or shopping malls, it is vital for even the tiniest detail to be built to the highest quality standards. In order to guarantee optimal quality we took Mr. Fontane’s saying to heart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

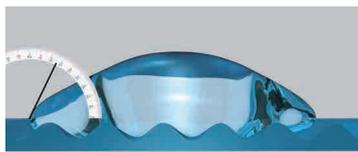
Non PVDF lacquered surface

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.

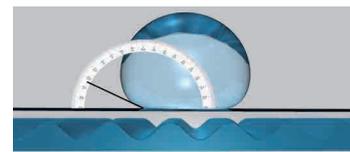
A special nanostructure minimises surface energy. The unique outcome of low surface energy is a significant reduction in the adhesive power of the surface when it comes to other molecules with higher surface energy such as water, dirt or dust.



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

Material composition								
Finish	Nanopolymered fluorinated lacquer system on both sides, protected against microbial and fungal attack, UV-protected, Titaniumdioxide (TiO ₂) 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	Polyester Panama Weave P 3/4
Yarn count	DIN ISO 2060	dtex	1100	1100	1670	1670	2200	2200
Low-wick yarn treatment	Methylen blue liquid method	mm	< 5	< 5	< 5	< 5	< 5	< 5
Total weight	EN ISO 2286-2	g/m ²	700	900	1050	1350	1550	1550
Fabric thickness		mm	0.6	0.8	0.9	1.1	1.3	1.3
CMD ratio (Front:Back)			3:2	3:2	3:2	3:2	3:2	3:2
Mechanical properties								
Tensile strength (warp/weft)	DIN EN ISO 1421/V1	N/50 mm	3000 / 3000	4300 / 4200	6000 / 5500	8000 / 7000	10000 / 9000	10000 / 9000
Elongation at break (warp/weft)	DIN EN ISO 1421/V1	%	22 / 30	23 / 29	24 / 32	24 / 33	27 / 29	27 / 29
Tear strength (warp/weft)	DIN 53363	N	300 / 300	500 / 500	900 / 800	1200 / 1200	2000 / 2000	2000 / 2000
Adhesion	PA 09.03	N/cm	20	25	25	26	30	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	100,000 T - no cracks
Physical properties								
Light fastness	DIN EN ISO 105 B02		> 6	> 6	> 6	> 6	> 6	> 6
Cold resistance	DIN EN 1876-1	°C	-40	-40	-40	-40	-40	-40
Heat resistance	PA 07.04	°C	+70	+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	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

We are ISO 9001 certified. All MEHATOP N products are 100% recyclable through the EPCoat system, information is available on request.

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.



Glued by the impressively committed employees of the sheltered workshop





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.



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

MEHATOP® N

... accepts the challenges of:

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

Our high-quality products are based on technology from 60 years of development and production expertise. Manufactured in Germany under the internationally recognised quality standard DIN EN ISO 9001:2008.



...More Experience!

We are your reliable partner for tensile architecture applications. 60 years of experience in textile industry have shaped a huge knowledgebase with an incommensurable know-how advantage.

...More Assistance!

MEHGIES® TensileDraw is a free plug-in software package for 3D model design, which is fully AutoCAD® and RHINO® compatible.

...More Guidance!

If you are new to the sector, we offer you a warm welcome to the world of textile architecture. That's why we have authored a technical guideline to permanent structures in cooperation with the IMS Institute of Germany. If you have always wondered just how inspiring, limitless and unique textile architecture can be, this guide will provide you with valuable insights.

...More Sustainability!



Eco-care is our guideline of handling energy and resources, the use of environmentally sustainable components, and it describes our activities in the area of recycling coated fabrics.



Registration, Evaluation and Authorisation of Chemicals

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

We 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.](#)



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



We are in an ongoing process to enhance our sustainability performance. One crucial factor is that all our fabrics are 100% recyclable due to an exact tracing system.



Sales companies and Sales offices

France / Low & Bonar Lyon S.A.R.L.
Bât. A1, 3 chemin des Cytises
F-69340 Francheville
info-fr@mehler-texnologies.com

U.K. / Low & Bonar Oldham Ltd.
Hollinwood Business Centre
Albert Street, Oldham,
Lancs. OL8 3QL
info-uk@mehler-texnologies.com

Italy / Low & Bonar Italy S.r.l.
Via Enrico Fermi 52/A
I-20019 Settimo Milanese MI
info-it@mehler-texnologies.com

Poland / Low & Bonar Poland Sp. z o.o.
ul. Mikołajczyka 31a
PL-41-200 Sosnowiec
info-pl@mehler-texnologies.com

Latvia / SIA „Low & Bonar Latvia“
Krustpils iela 54 E
Rīga, LV-1057
info-lv@mehler-texnologies.com

Romania / Low & Bonar Romania S.R.L.
Str. Linia de Centura Nr.2, D2
RO-077175 Stefanesti de Jos
(Judetul Ilfov)
info-ro@mehler-texnologies.com

**Turkey / Low and Bonar Turkey
Teknik Tekstil Ticaret Limited Sirketi**
Başakşehir San. Sit.
A Blok No: 22, Başakşehir
TR- Istanbul
info-tr@mehler-texnologies.com

U.S.A / Low & Bonar Martinsville Inc.
220 B Cabell Street
Martinsville, VA 24112
info-usa@mehler-texnologies.com

**United Arab Emirates /
Low & Bonar Middle East Trading LLC**
13 Sheikh Rashid Road, Al Garhoud 214
Ithraa Tower, Office no. 803, Dubai-UAE
info-uae@mehler-texnologies.com

**India /
Low & Bonar India Pvt. Ltd.**
924, 9th Floor, Wave Silver Tower, Sector 18,
Noida 201 301, UP, India
info-in@mehler-texnologies.com

**Malaysia /
Low & Bonar South East Asia**
Suite 20-01 & 20-02B, Level 20,
The Pinnacle
Persiaran Lagoon Bandar Sunway
Subang Jaya, 47500 Malaysia
info-mys@mehler-texnologies.com

Low & Bonar Czech s.r.o.
Šlechtova 860
CZ-512 51 Lomnice nad Popelkou
info.cz@mehgies.com

Russia / Low & Bonar Rus OOO
Sadovnicheskaya embankment 79
115035 Moscow
info-ru@mehler-texnologies.com

Australia / Low & Bonar Office
PO BOX 339, Waterford West,
Queensland 4133, Australia
info-aus@mehler-texnologies.com

China / Eusource International
Guangzhou Office
R.806 Goayage, Tianyu Garden
152 Linhe Zhong Road
Guangzhou 510610
info-chn@mehler-texnologies.com

Manufacturing and sales

Low & Bonar GmbH
Rheinstrasse 11
D-41836 Hückelhoven
info.de@mehgies.com

Low & Bonar GmbH
Edelzeller Strasse 44
D-36043 Fulda
info.de@mehgies.com