

## DECLARATION OF PERFORMANCE

### MARMOX Drainage Line Grid

<b>1. Product Type:</b> Unique identification code of the product-type:	<b>MARMOX Drainage Line Grid</b>
<b>2. Material:</b>	<b>Polymer concrete</b>
<b>3. Type</b> serial number or any other element allowing identification of the construction product as required under Article 11(4):	0006 M01, 0006 M02
<b>4. Intended use</b> or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:	<b>Heavy duty drainage line grid</b> (as per the order items)  <b>See point 9.</b>
<b>5. Name, registered trade name</b> or registered trade mark and contact address of the manufacturer:	<b>MARMOX Drainage Line Grid</b>  <b>MARMOX, 319 El Haram St., Giza / Egypt</b> <b>Tel.: +20 – 23 58 28 534</b>
<b>6. Contact Address:</b> Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):	<b>LMS Dr. Lietz Marketing Services GmbH</b> <b>Wackenbergstr. 65-75</b> <b>D – 13156 Berlin</b>
<b>7. AVCP:</b> System or systems of assessment and verification of constancy of performance (AVCP) of the construction product as set out in CPR, Annex V:	<b>SGS Egypt Limited LLC Industrial Service – member of SGS Group.</b> 9G Ahmed Kamel Street (off Laselky Street), New Maadi, Cairo, Egypt.  <b>National Organisation for Potable Water and Sanitary Drainage Egypt.</b> Administration of Testing & Industry Supervision. Nasr City – Cairo. Egypt.  <b>National Research center</b> Canter unit for analysis and scientifically services Dokki, Cairo, Egypt.
<b>8. Standard:</b>	<b>EN 1433</b>

## 9. Declared performance:

### CLASSES OF MARMOX DRAINAGE LINE GRID ACCORDING TO EN-1433

Group	Min. Class	Place of installation
1	A-15	Areas which can only be used by pedestrians and pedal cyclists
2	B-125	Footways, pedestrian areas and comparable areas, car parks or car parking decks
3	C-250	For gully tops installed in the area of curbside channels of roads which when measured from the curbside, extends a maximum of 0.5 m into the carriage way and a maximum of 0.2 into the footway.
4	D-400	Carriage ways of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles.
5	E-600	Areas imposing high wheel roads, e.g. decks, aircraft pavements
6	F-900	Areas imposing particularly high wheel loads, e.g. aircraft pavements

### TECHNICAL SPECIFICATION OF

Property	Measurement Method	Values	Unit
Density	DIN 53472	2.45 (±5%)	g/cm <sup>3</sup>
Bending Strength	DIN 1164	300 (±5%)	kg/cm <sup>2</sup>
Compressive Strength	DIN 1164	1150 (±5%)	kg/cm <sup>2</sup>
Tensile Strength	DIN 53455	150 (±5%)	kg/cm <sup>2</sup>
Modulus of Elasticity	DIN 53457	2.5 x 10 <sup>5</sup>	kg/cm <sup>2</sup>
Surface Hardness	DIN 53505	≤ 80	
Linear Thermal Coefficient of Expansion	VDE 0304/1	1.5 x 10 <sup>-5</sup> / 1°C	
Water Absorption	DIN 53495	< 0.1%	
Chemical Resistance		Highly resistant	
Environmental Aspects		Environmental friendly	
Fire Resistance	DIN 4102	Fire resistant (A2)	

## 10. Declaration

The performance of the product identified in points 1 and 3 is in conformity with the declared performance in point 9. This declaration of performance (DoP) is issued under the sole responsibility of the manufacturer identified in point 5.

Signed for and on behalf of the manufacturer by:



Mourad Hawas  
Head Corporate Product Engineer Membranes

  
Uwe Lietz, GF  
Head Corporate Target Market

14<sup>th</sup>, January 2015.

## 9. Declared performance:

### CLASSES OF MARMOX DRAINAGE LINE GRID ACCORDING TO EN-1433

Group	Min. Class	Place of installation
1	A-15	Areas which can only be used by pedestrians and pedal cyclists
2	B-125	Footways, pedestrian areas and comparable areas, car parks or car parking decks
3	C-250	For gully tops installed in the area of curbside channels of roads which when measured from the curbside, extends a maximum of 0.5 m into the carriage way and a maximum of 0.2 into the footway.
4	D-400	Carriage ways of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles.
5	E-600	Areas imposing high wheel roads, e.g. decks, aircraft pavements
6	F-900	Areas imposing particularly high wheel loads, e.g. aircraft pavements

### TECHNICAL SPECIFICATION OF

Property	Measurement Method	Values	Unit
Density	DIN 53472	2.45 (±5%)	g/cm <sup>3</sup>
Bending Strength	DIN 1164	300 (±5%)	kg/cm <sup>2</sup>
Compressive Strength	DIN 1164	1150 (±5%)	kg/cm <sup>2</sup>
Tensile Strength	DIN 53455	150 (±5%)	kg/cm <sup>2</sup>
Modulus of Elasticity	DIN 53457	2.5 x 10 <sup>5</sup>	kg/cm <sup>2</sup>
Surface Hardness	DIN 53505	≤ 80	
Linear Thermal Coefficient of Expansion	VDE 0304/1	1.5 x 10 <sup>-5</sup> / 1°C	
Water Absorption	DIN 53495	< 0.1%	
Chemical Resistance		Highly resistant	
Environmental Aspects		Environmental friendly	
Fire Resistance	DIN 4102	Fire resistant (A2)	

## 10. Declaration

The performance of the product identified in points 1 and 3 is in conformity with the declared performance in point 9. This declaration of performance (DoP) is issued under the sole responsibility of the manufacturer identified in point 5.

Signed for and on behalf of the manufacturer by:

Mourad Hawas  
Head Corporate Product Engineer Membranes

Uwe Lietz, GF  
Head Corporate Target Market

14<sup>th</sup>, January 2015.