

# DATA SHEET



## **EM1000 Fine Ribbed Electrical Safety Matting, rated to IEC61111:2009 Class 0**

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EM1000 Fine Ribbed Rubber Matting to IEC61111-2009 Class 0, is a high quality electrical safety matting fully tested to 1,000 volts working voltage with the regulation standard stamped on reverse of roll at 1000mm intervals: Maximum safe working voltage of 1,000V.

It has a fine ribbed, anti-slip surface pattern on one side and a cloth impression finish on the reverse.

- Fully tested to specification
- Health & Safety regulation material including flame retardance
- Fully traceable supply
- Regulatory branding on reverse
- Anti-slip finish
- Low maintenance
- Available 0.91m , 1.0m and 1.2m wide rolls, thickness 3mm, 4mm or 6mm
- THIS GRADE DOES NOT CONTAIN RECYCLED RUBBER

Due to the very high quality of the raw materials the need for additional thickness is not necessary. The IEC:61111 specification states 'maximum' thickness with minimum thickness being determined by suppliers' ability to pass the correct tests defined in Clause 5 of specification. The above materials do so with the integral 'lay-flat' quality of the rubber compounds unimpaired in any way.

In addition to the above our thinner grades present less of a trip hazard when laid offering additional safety to operators.

Standard finishes on this type is FINE RIBBED [corrugated] one side with an anti-creep impression on reverse.

### **MARKINGS**

The example marking on the underside of the mat will consist of a tag denoting details:

The brand shall be placed at 1000mm intervals along length of rolls.

The brand shall be colour coded as per IEC:61111:2009 guidelines

Class '0' - RED , Class '1' - WHITE, Class '2' - YELLOW, Class '3' - GREEN, Class '4' - ORANGE



Certificate No: GB08/75575

Directors: Martin Bailey, Jonathan Fisher

Registered in England No: 6033135

VAT No: GB 899 1951 52



## IN SERVICE RECOMMENDATIONS FOR MATTING TO BS EN 61111:2009

**MATTING CODES:** EM1000/1M/CLASS0 EM1000/0.914M/CLASS0 EM1000/1.22M/CLASS0

**SIZES:** 1.0m x 10m, .914m x 10m, 1.22m x 10m & Cut Pieces

**TEST LABORATORY** UKAS ISO17025 (0065)

These mats are to be part of a safe system of work and not to be the only protection against electrical risk.

**CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THIS PRODUCT**

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**THESE MATS ARE INTENDED TO BE USED EXCLUSIVELY FOR ELECTRICAL PURPOSES.**

**The following is for guidance only for the maintenance, inspection, retest and use of mats after purchase.**

### **STORAGE**

Matting should be stored in their container or package. Care should be taken to ensure that the matting is not compressed, folded, or stored in proximity to steam pipes, radiators or other sources of artificial heat or exposed to direct sunlight, artificial light or other sources or ozone. It is desirable that the ambient temperature be between 10°C and 21°C.

### **TRANSPORTATION**

It is recommended that the matting be packaged in an individual container of sufficient strength to properly protect the matting from damage.

### **EXAMINATION BEFORE USE**

Each time before use, the matting should be visually inspected. If the matting is thought to be unsafe, it shall not be used and should be returned for testing or destroyed.

### **PRECAUTIONS IN USE**

Matting should not be exposed unnecessarily to heat or light or allowed to come in contact with oil, grease, turpentine, white spirit or strong acid.

When rubber matting becomes soiled, it should be washed with soap and water at a temperature not exceeding that recommended by the matting manufacturer, and thoroughly dried. If insulating compounds, such as tar and paint, continue to stick to the mat, the affected parts should be wiped immediately with a suitable solvent, avoiding excessive solvent use, and then immediately washed and treated as described above.

Matting which becomes wet in use or by washing shall be dried thoroughly, but not in a manner that will cause the temperature of the matting to exceed 65°C.

## **PERIODIC INSPECTION AND ELECTRICAL RE-TESTING**

No matting of classes 1, 2, 3 and 4, even those held in storage, should be used unless they have been electrically tested in accordance with EN 61111:2009 within a maximum period of twelve months.

For class 0, a visual inspection may be considered adequate. However, a routine dielectric test in accordance with EN 61111:2009 may be performed at the owner's request and is recommended by the manufacturer.

## **POTENTIAL ALLERGENS**

Zinc diethyldithiocarbamate, Zinc mercaptobenzothiazole, Parabens, Natural rubber latex protein.

## **GUIDELINES FOR THE SELECTION OF THE CLASS OF MATTING IN RELATION TO NOMINAL VOLTAGE OF A SYSTEM**

The choice of insulating matting in accordance with this standard and for use in live working is determined by the following:

- The highest voltage of the system;
- The required insulation level for live working (RILL);
- The supplemental protective insulating equipment utilized by the worker;
- The work practices required by the employer and utilized by the employee.

The maximum use voltage recommended for each class of matting is designated in Table D.1. of EN 60903:2003

Table D.1 – Designation of maximum use voltage

Class	AC V rms	DC V
0	1,000	1,500
1	7,500	11,250
2	17,000	25,500
3	26,500	39,750
4	36,000	54,000

The maximum use voltage is the a.c. voltage (r.m.s.) rating of the protective equipment that designates the maximum nominal voltage of the energized system that may be safely worked. The nominal voltage is equal to the phase-to-phase voltage on multiphase circuits.

If there is no multiphase exposure in a system area, and the voltage exposure is limited to the phase (polarity on d.c. systems) to ground potential, the phase (polarity on d.c. systems) to ground potential, shall be considered to be the nominal voltage.

If electrical equipment and devices are insulated, or isolated, or both, such that the multiphase exposure on an earthed, neutral star circuit (grounded wye circuit) is removed and if supplemental insulation (e.g. insulated aerial device or structure-mounted insulating work platform) is used to insulate the worker from ground, then the nominal design voltage may be considered as the phase-to-ground voltage on that circuit.

The user may then decide to use a different class of mat than that recommended in Table D.1.

## **PRODUCT MARKING**

The product is marked every running metre on the reverse side as per specification showing the working voltage, year and month of manufacture and is colour coded also to specification to indicate the class as in Table D.1. ie: Red = Class 0, White = Class 1, Yellow = Class 2, Green = Class 3, Orange = Class 4.



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<b>Test Certificate No. 00001</b>  <b>IEC61111:2009</b>  <b>Class 0</b>  <b>Live working - Electrical Insulating Matting</b> <b>Working Voltage 1000V AC</b> <b>Delta Rubber Reference: EM1000/N09</b>	
Classification to IEC 61111:2009	Class 0
Working voltage	1000V A.C.
Surface Colour Thickness	Ribbed Corrugations Black 6.0 mm
Mechanical puncture resistance	not less 70 N
Proof test 1 kV/s, 1 min, 5000V A.C.	PASS -no breakdown
Withstand test 1 kV/s, 10000V A.C.	PASS -no breakdown
Ageing test 168 h. 70°C	PASS - not less 80% of un-aged test
Flame retardance test 10 s, radius 50 mm	PASS - flame does not reach any point on a 50 mm radius circle
Thermal test -25°C, 100 N, 30 s, 20 kV A.C., 3 min	PASS - no crack, no breakdown
Acid resistance 8 h. H <sub>2</sub> SO <sub>4</sub> 32°Baumé, 30 kV A.C.	PASS - no breakdown, not less 70 N or less than 75% of un-aged test.
Oil resistance 70°C, 24 h. in oil, 30 kV A.C.	PASS - no breakdown, not less 70 N or less than 75% of un-aged test.

A conformity test of this product was carried out by an ISO/IEC 17025 accredited laboratory (0067). Test Report CTR 54696.



## Statement of Product Conformity

Systems Certified to ISO 9001:2008

**Delta Rubber Ltd**

Declare that

### Live working –Electrical Insulating Matting Class 0 Working Voltage 1000V AC

Is in conformity to IEC61111:2009 under the harmonized national standard BS EN61111:2009.

The product was examined by Smithers Rapra Technology Ltd, Shawbury, Shrewsbury, Shropshire, SY4 4NR, United Kingdom. An ISO/IEC 17025 accredited laboratory (UKAS 0067). The technical report produced CTR 54696 confirms its conformity to the performed tests stated in the standard EN61111:2009.

Class	Reference	Max Thickness mm	Proof Test AC Voltage	Max Use AC Voltage	Test Report No. Certificate
0	N09 CLASS0	6	5000	1000	CTR 54696

**Colour** - Black

**Surface** - Ribbed Corrugations

#### **Mechanical Properties**

Puncture Test Not less than 70N

Flame Retardancy Flame not to reach any point on 50mm circle

#### **User Information**

No electrical insulating matting, even those held in storage should be used unless they have been inspected and/or electrically tested within the previous 12 months.



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