



ELECTRICAL Insulation **MAT**



INTRODUCTION

How Do Electrical Insulation Mats Work?

Electrical Insulation mats are made of rubber. Rubber, due to its properties of resistivity, is used in many applications throughout industry to insulate and protect; it is an obvious choice for electrical safety matting and is tested vigorously to ensure the level of protection is met.

Rubber is a natural dielectric material and will therefore inhibit the flow of electric charge as a result of its molecular structure preventing the free flow of electrons. The dielectric and electrically resistant properties of rubber make it an ideal insulator. This when combined with the flexibility and cushioning nature of the material, makes it a perfect choice for electrical safety matting.

Maintaining the insulating properties of the Rubber is intrinsically linked to the construction of the compound. Any additives (dyes, fillers, preservatives and curatives) can all affect the electrical resistance, hence the need for strict quality control standards to be applied throughout manufacture to maintain the insulation performance.

SAFE – Electrical Insulation Mats

SAFE Electrical Insulation Mats are high voltage rubber mats, they confirm to IEC 61111 and are manufactured using high quality elastomer rubber in order to provide complete protection against electric shock due to earth faults.

SAFE Electrical Insulation Mats are suitable for use in outdoor and indoor applications and are generally placed in front of electrical panels, switch gears & high voltage equipments in order to create a safe working environment for the operators/users.

The SAFE Electrical Insulation mat, insulates the worker from the ground to avoid him being crossed by electrical current in case of direct contact or pace voltage. The choice of the class must be determined according to the maximal nominal voltage of the network.

The Marking colour is made according to the colour coding of the IEC 61111, Matting confirms the following specifications required by IEC 61111:

- Puncture resistance test
- Dielectric test
- Ageing test
- Flame retardance test
- Acid resistance test
- Oil resistance test

Mat Specifications

- Material: Rubber
- Temp Range: -40°C to +70°C
- Colour available in black and dark grey

Mat Features

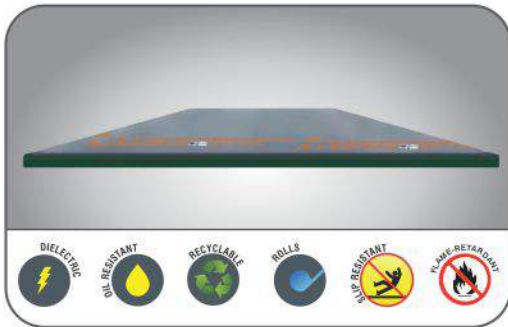
- Can withstand 10 KV to 50 KV
- Suitable for both AC & DC installation
- Electrical mat is hard wearing, non-slip and can be easily clean or washed with a mild detergent
- Anti-fatigue nature, comfort feet while standing for prolonged period
- Matting is packed in 10 meters rolls to avoid joints, however cut lengths are also supplied
- Conformity with IEC 61111-2009 requirements
- Every 600 mm is marked with class & working voltage
- Electrically tested for each meter

Which product should I choose?

There is now only one industry standard for electrical safety matting in European Union. This harmonisation means only the IEC EN 61111:2009 live working- electrical insulating matting is correct under CENELEC regulation.



CLASS 0



Working Voltage : 1000 V AC
Proof Voltage : 5000 V AC
Withstand Voltage : 10000 V AC

FINISH : Fabric Print

PRODUCT CODE	SIZE
ES0FI X - 0.6 X 1	0.6M X 1M
ES0FI X - 0.6 X 5	0.6M X 5M
ES0FI X - 0.6 X 10	0.6M X 10M
ES0FI X - 1 X 1	1M X 1M
ES0FI X - 1 X 5	1M X 5M
ES0FI X - 1 X 10	1M X 10M
ES0FI X - 1.2 X 1	1.2M X 1M
ES0FI X - 1.2 X 5	1.2M X 5M

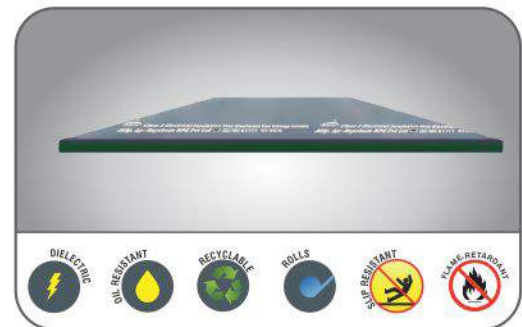
X indicates the colour of the Mat, Kindly replace **X** with G for dark grey colour and B for black colour while ordering.

CLASS 1

FINISH : Fabric Print

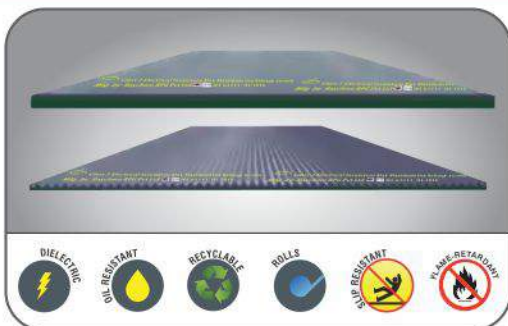
PRODUCT CODE	SIZE
ES1FI X - 0.6 X 1	0.6M X 1M
ES1FI X - 0.6 X 5	0.6M X 5M
ES1FI X - 0.6 X 10	0.6M X 10M
ES1FI X - 1 X 1	1M X 1M
ES1FI X - 1 X 5	1M X 5M
ES1FI X - 1 X 10	1M X 10M
ES1FI X - 1.2 X 1	1.2M X 1M
ES1FI X - 1.2 X 5	1.2M X 5M
ES1FI X - 1.2 X 10	1.2M X 10M

Working Voltage : 7500 V AC
Proof Voltage : 10000 V AC
Withstand Voltage : 20000 V AC



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CLASS 2



Working Voltage : 17000 V AC
Proof Voltage : 20000 V AC
Withstand Voltage : 30000 V AC

FINISH : Corrugated

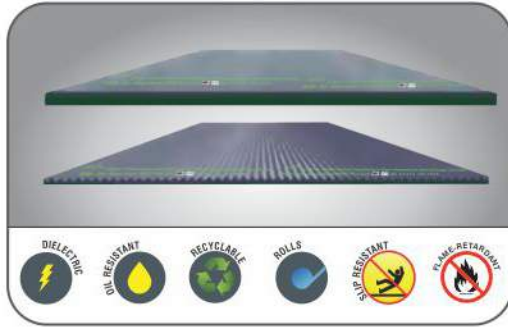
PRODUCT CODE	SIZE
ES2RI X - 0.6 X 1	0.6M X 1M
ES2RI X - 0.6 X 5	0.6M X 5M
ES2RI X - 0.6 X 10	0.6M X 10M
ES2RI X - 1 X 1	1M X 1M
ES2RI X - 1 X 5	1M X 5M
ES2RI X - 1 X 10	1M X 10M
ES2RI X - 1.2 X 1	1.2M X 1M
ES2RI X - 1.2 X 5	1.2M X 5M
ES2RI X - 1.2 X 10	1.2M X 10M

FINISH : Fabric Print

PRODUCT CODE	SIZE
ES2FI X - 0.6 X 1	0.6M X 1M
ES2FI X - 0.6 X 5	0.6M X 5M
ES2FI X - 0.6 X 10	0.6M X 10M
ES2FI X - 1 X 1	1M X 1M
ES2FI X - 1 X 5	1M X 5M
ES2FI X - 1 X 10	1M X 10M
ES2FI X - 1.2 X 1	1.2M X 1M
ES2FI X - 1.2 X 5	1.2M X 5M
ES2FI X - 1.2 X 10	1.2M X 10M

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CLASS 3



Working Voltage : 26500 V AC
Proof Voltage : 30000 V AC
Withstand Voltage : 40000 V AC

FINISH : Corrugated

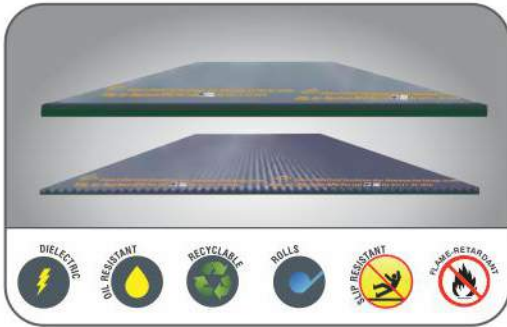
PRODUCT CODE	SIZE
ES3RI X - 0.6 X 1	0.6M X 1M
ES3RI X - 0.6 X 5	0.6M X 5M
ES3RI X - 0.6 X 10	0.6M X 10M
ES3RI X - 1 X 1	1M X 1M
ES3RI X - 1 X 5	1M X 5M
ES3RI X - 1 X 10	1M X 10M
ES3RI X - 1 X 1	1.2M X 1M
ES3RI X - 1 X 5	1.2M X 5M
ES3RI X - 1 X 10	1.2M X 10M

FINISH : Fabric Print

PRODUCT CODE	SIZE
ES3FI X - 0.6 X 1	0.6M X 1M
ES3FI X - 0.6 X 5	0.6M X 5M
ES3FI X - 0.6 X 10	0.6M X 10M
ES3FI X - 1 X 1	1M X 1M
ES3FI X - 1 X 5	1M X 5M
ES3FI X - 1 X 10	1M X 10M
ES3FI X - 1 X 1	1.2M X 1M
ES3FI X - 1 X 5	1.2M X 5M
ES3FI X - 1 X 10	1.2M X 10M

X indicates the colour of the Mat, Kindly replace **X** with G for dark grey colour and B for black colour while ordering.

CLASS 4



Working Voltage : 36000 V AC
Proof Voltage : 40000 V AC
Withstand Voltage : 50000 V AC

FINISH : Corrugated

PRODUCT CODE	SIZE
ES4RI X - 0.6 X 1	0.6M X 1M
ES4RI X - 0.6 X 5	0.6M X 5M
ES4RI X - 0.6 X 10	0.6M X 10M
ES4RI X - 1 X 1	1M X 1M
ES4RI X - 1 X 5	1M X 5M
ES4RI X - 1 X 10	1M X 10M
ES4RI X - 1 X 1	1.2M X 1M
ES4RI X - 1 X 5	1.2M X 5M
ES4RI X - 1 X 10	1.2M X 10M

FINISH : Fabric Print

PRODUCT CODE	SIZE
ES4FI X - 0.6 X 1	0.6M X 1M
ES4FI X - 0.6 X 5	0.6M X 5M
ES4FI X - 0.6 X 10	0.6M X 10M
ES4FI X - 1 X 1	1M X 1M
ES4FI X - 1 X 5	1M X 5M
ES4FI X - 1 X 10	1M X 10M
ES4FI X - 1 X 1	1.2M X 1M
ES4FI X - 1 X 5	1.2M X 5M
ES4FI X - 1 X 10	1.2M X 10M

X indicates the colour of the Mat, Kindly replace **X** with G for dark grey colour and B for black colour while ordering.

ACCESSORIES : CARRYING BAGS FOR MAT



PRODUCT CODE	DESCRIPTION
ESCB1-700X110	Carrying Bag for 600 mm wide mat
ESCB2-1100X110	Carrying Bag for 1000 mm wide mat



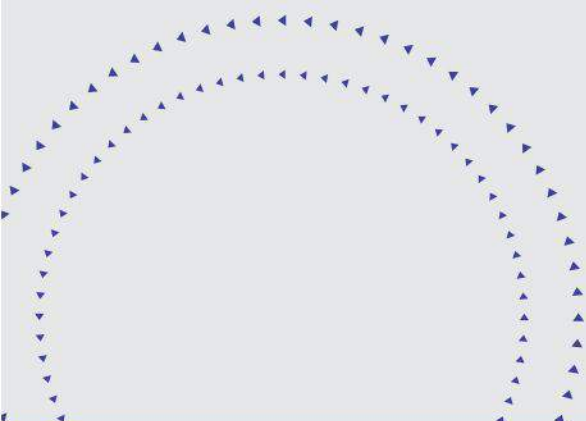
IEC 61111:2009

The CENELEC (European Committee for Electrotechnical Standardization) has been harmonising European safety products for a number of years, and the IEC (International Electrotechnical Commission) drew up an electrical safety matting standard in 1992. The IEC 61111 standard categorises product by working voltage, and allocates a class of protection against these. Each meter of matting is colour-coded on the reverse to highlight what level of protection it offers.

CLASSIFICATION

The following division is based on threshold level of electric current resistance.

Classification	Working Voltage	Proof Voltage	Withstand Voltage
Class0	1000 V AC	5000 V AC	10000 V AC
Class1	7500 V AC	10000 V AC	20000 V AC
Class2	17000 V AC	20000 V AC	30000 V AC
Class3	26500 V AC	30000 V AC	40000 V AC
Class4	36000 V AC	40000 V AC	50000 V AC





OUR COMPANY

Raychem RPG (P) Ltd., incorporated in 1989, is a 50:50 joint Venture between TE Connectivity, U.S.A. (formerly Tyco Electronics) and RPG Enterprises, India.

TE Connectivity is a US\$13 Billion global provider for solutions in Network, Transportation, Consumers and Industrial for over 50 years.

RPG Enterprises, an establishment of over 30 years, is one of India's fastest growing business groups with turnover of US\$ 3 Billion. The group has more than fifteen companies managing diverse business interests in the areas of Automotive Tyres, Infrastructure, IT and Specialty including Pharmaceuticals, Power Ancillaries & Plantations.



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