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BS921:1976

This standard is now withdrawn and matting can no longer be sold to this standard. However, the matting which was previously manufactured to this standard is still available and you will find it under the following headings (please note, however, that these products no longer meet a current recognised British Standard):

450V protection.

If you are using 240V single phase switchgear we recommend you allow for a 90% margin by specifying 450V protection by purchasing the appropriate matting from our range of products.

Up to its maximum working voltage of 450V this will protect the user. These mats are tested electrically up to **11,000V** removing any possibility of contamination, holes or porosity in the rubber.

650V protection.

If you're working with 415V three phase switchgear we recommend you allow a 50% margin of safety by using the **650V** mat for protection.

The grade of rubber will protect users up to a maximum working voltage of 650V. Tested to **15,000V**.

What was BS921:1976?

BS921 was a British Standard Specification for rubber mats for electrical purposes; it is now recognised within the trade as having been superseded by BS EN61111:2009. The BS921:1976 specification dealt with insulating mats made of solid natural or synthetic rubber used as floor coverings near electrical apparatus where circumstances involve the possibility of direct contact with conductors whose voltage does not exceed 650 V r.m.s. to earth

The standard defined:

- Composition
- Construction
- Thickness and width
- Workmanship and finish
- Performance requirements
- Marking

Key requirements of the standard stipulated that

- 100% of the mat is tested at 15kV for 1 minutes and the leakage stipulation tested
- The mat is clearly marked with the test standard, date and identification mark of the manufacturer
- The dimensions always meet the specification
- The rubber compound meets the physical property requirements.

BS EN 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 IEC61111 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. The classes, and corresponding colour codes, are as follows:

All matting within classes 1, 2, 3 and 4, including those in storage, should be tested every 12 months in accordance with EN 61111: 2009. A visual inspection may be adequate for Class 0, however, a routine dialectic test in accordance with EN 6111:2009 may be performed on request, and is recommended by the manufacturer.

The BS EN 61111 specification also requires that manufacturers test the material against the following criteria:

- Mechanical Puncture Resistance
- Oil Resistance
- Acid Resistance
- Slip Resistance
- Flame Retardancy
- Ageing
- Marking Durability

The marking on the back of the matting must be durable, clearly visible and must not impair the electrical matting and to conform to the specification it must show the following:-

- name, trademark or identification of the manufacturer
- Suitable for live working; double triangle
- number of the relevant IEC standard immediately adjacent to the symbol, (IEC 61111)
- month and year of manufacture
- category if applicable
- class designation.

Below is an example of how the marking may look for the Class 0 Matting, you will notice that it is in red this is part of the colour coding in the standard and it denotes Class 0.