

Periodic Re-testing and Shelf Life of Insulating Gloves for Electrical Work

Introduction

The requirements regarding insulating gloves for electrical work are detailed in the standard, *BS EN 60903:2003 Live working – Gloves of insulating material*, and, *In-service recommendations* are included in Annex E. Annex E is an informative annex, which means that the information and recommendations that it contains are guidance provided to enlighten and assist: it is not obligatory for these aspects of the document to be implemented in order to achieve compliance with the standard.

The following is included in Annex E:

E.2 Examination before use

Each time before use, both gloves of a pair should be visually inspected and subjected to a manually applied air test, where practicable. If either glove is thought to be unsafe, the pair should not be used and should be returned for testing.

E.5 Periodic inspection and electrical re-testing

- No gloves of classes 1, 2, 3 and 4, not even those held in storage, should be used unless they have been tested within a maximum period of six months. The most common periods currently range from 30 days to 90 days.
- The test consists of air inflation to check for air leaks and a visual inspection while pressurised, where possible. Then a routine dielectric test in accordance with 8.4.2.1 and 8.4.3.1 and 10.3 for the long composite glove.
- For class 00 and class 0 gloves, a check for air leaks and a visual inspection may be considered adequate. However, a routine dielectric test may be performed at the owner's request.
- For lined gloves, the test should be carried out by means of an appropriate tester to make sure that gloves are not defective.

As none of the above is obligatory, ultimately it is the user's responsibility to determine how they wish to proceed regarding periodic inspection and re-testing.

Recommendations

It is high-lighted by the manufacturer that the raw material used to produce the electrician's glove is natural rubber (latex), which ages with time depending upon environmental conditions. Therefore, it is important to follow the storage and transport conditions recommended in the directions for use and to reduce, as much as practically possible, the length of storage times.

Like the standard, the manufacturer suggests two procedures depending on the class of glove:

- **Class 00 and 0 Gloves.**
For class 00 and 0 gloves, the electrical test would be the best way of checking. However, due to the constraints involved, it is suggested that inflating gloves before each use is the minimum that should be done to check their quality. The visual checking must be done very carefully to detect any alteration of the internal and the external surfaces. A glove pneumatic tester optimises control, notably for the cuff.
- **Class 1, 2, 3 and 4 Gloves.**
Due to the structure of the gloves (e.g., thickness) an inflation cannot be carried out. Therefore, checking before each use is essential, consisting of looking very carefully at the internal and the external surfaces of the gloves. As with the standard, the manufacturer's position is that the gloves should be electrically re-tested every six months

If, upon inspection, there is any doubt regarding their safety or quality, gloves should not be used.

Shelf Life and Expiry Date

It is important to note that the standard does not define any expiry date relating to the use of electrician's gloves and it is the responsibility of the user to ensure that gloves meet all requirements, including electrical resistance.

From experience and statistics, the manufacturer knows that the gloves maintain their performance for more than one year. However, as the manufacturer cannot control the conditions of use, transport and storage, it is not possible for the manufacturer to give a shelf life time or expiry date. Therefore, insulating rubber gloves do not have any expiry date and can be used as long as they pass the periodic inspection.

The date of manufacture is the original test date. The date of manufacture is printed on the gloves.

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