

## **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.

Polyco Healthline suggests two procedures depending on the class of glove:

- Class 00 and 0 Gloves:
  - For class 00 and 0 gloves, the electrical test every 6 months from placing in service is recommended. However, due to the constraints involved, inflating gloves and a visual check 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 should be used for the inflation. Not doing the electrical retest every 6 months would be based on the customers own risk assessment.
- 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**

All gloves are tested at the time of manufacture. The gloves may be held upon the shelf for up to 365 days (one year) unopened before putting into use.

Once opened the date should be recorded and the gloves can then be used for up to six months, at which time they will then require re-testing.

This means that a new pair of gloves should be put into use within 12 months of the manufacturing date and can be used for 6 months once put into service, before retesting is required. If the gloves are not put into service within 12 months of the manufacturing date they **must** be retested before putting into use.

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. If the gloves are not put into service within 3 years of the manufacturing date Polyco Healthline would recommend disposal.