

**Electrical Testing of ASTA Approved Products.**

Each product shall be subjected to the appropriate electrical strength test and insulation resistance test on a 100% basis as detailed below:

**a) For products fitted with a 3 core flexible cord (i.e. Class I Products):**

- i) The earth circuit shall be checked for continuity at a current of not less than 25A at a test voltage not less than 12V, 50Hz applied for not less than 1 sec. between the earth pin or contact and the earth conductor. For cords up to 1.0m in length the resistance between the earth pin or contact and the earth conductor shall not exceed 0.05 Ohms. Where the length of the cord under test exceeds 1.0m and is such that its resistance is in excess of 0.05 Ohms the manufacturer shall define and demonstrate the appropriate resistance limit for the test.
- ii) A test voltage of not less than 2.5kV a.c. 50Hz shall be applied for not less than 1 sec. between live parts connected together and earth.
- iii) The insulation resistance, measured using a d.c. voltage of not less than 500V, between live parts connected together and earth shall be not less than 5 Megohms.

*Note: It is permissible to combine the tests of a ii) and a iii) ie. perform the insulation resistance test at 2.5kV a.c. in which case the test facility shall be set to trip at a current not greater than 0.5mA.*

**b) For all products:**

- i) A test voltage of not less than 2.5kV a.c. 50Hz shall be applied for not less than 1 sec. between live parts of different polarity.
- ii) A test voltage of not less than 4.2kV a.c. 50Hz shall be applied for not less than 1 sec. between live parts connected together and a conductive shroud making contact with the external surface of the product(s) excluding the engagement face of the plug.
- iii) The insulation resistance, measured using a d.c. voltage of not less than 500V, between live parts of different polarity shall not be less than 5 Megohms.

*Note 1: It is permissible to combine the tests of 'b i)' and 'b iii)' ie. perform the insulation resistance test at 2.5kV a.c. 50Hz in which case the test facility shall be set to trip at a current not greater than 0.5mA.*

*Note 2: The above duration of 1 sec for the test of 'a' and 'b' are applicable where these tests are performed utilising automatic test apparatus. Where the test voltages are applied manually each duration shall be 2 sec.*

*Note 3: The test voltage of b ii) is reduced to 3.75kV a.c. 50Hz when testing rewirable plugs that have been fitted with a flexible cord.*

*Note 4: Test b) ii) may be replaced by an equivalent test, if it can be demonstrated that faults can be detected reliably.*

**The product is considered to comply providing that there is no breakdown or flashover.**

**Any failure to comply during any of the above tests shall produce a warning to the operator. It shall not be possible to remove a faulty product from the test facility without rendering the product unfit for service or without the authority of the person or persons responsible for quality assurance.**