



IBIX PolyHotCote-A (PHC-A) thermoplastic thermal spray powder is based on a modified polyolefin. Below is the test report extract performed on Electric Strength.

- Test Method:** Electric Strength measured to IEC 243:1988, with rapid voltage rise.
- Equipment used:** Medium voltage test system, No.76-023.
- Material:** Metal substrate with a coating of PolyHotCote-A (PHC-A) white 110.
- Specimen dimensions:** Five specimens tested, approx. 150x150mm. Coating thickness value $370 \pm 10 \mu\text{m}$.
- Electrodes:** Stainless steel 25mm diameter upper electrode. Metal substrate used as earth electrode, connection made by grinding away some of the coating on the reverse side of specimen.
- Electrode cleaning:** Initially cleaned with tissue and isopropyl alcohol and after each breakdown wiped with dry paper towel.
- Preconditioning:** >24 hours at $50 \pm 5\%$ RH and $23 \pm 2^\circ\text{C}$.
- Rate of rise of test voltage:** Rate of voltage rise selected to produce failure in 10 to 20 s.
- Surrounding medium:** Clean transformer oil.

Results:

| Specimen No. | Breakdown Voltage kV rms | Thickness near Breakdown mm | Electric Strength kV rms/mm |
|--------------------------------|--------------------------|-----------------------------|-----------------------------|
| 1 | 16.0 | 0.37 | 43.2 |
| 2 | 18.8 | 0.37 | 50.8 |
| 3 | 17.4 | 0.37 | 47.0 |
| 4 | 16.6 | 0.37 | 44.9 |
| 5 | 19.6 | 0.37 | 53.0 |
| Electric Strength median value | | | 47.0 kV/mm |
| Mean Electric Strength value | | | 47.8 kV/mm |

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