

19th January, 2015

TO WHOM IT MAY CONCERN

EN 545 & Plascoat PPA571 AQUA Powder Coatings

The current standard “EN 545 Ductile iron pipes, fittings, accessories and their joints for water pipelines – Requirements and test methods” will start its revision process during 2015, overseen by the technical committee CENTC 203 WG9, of which Plascoat is an integral part.

Alternative coatings are given in EN 545 under Annex D (*informative*), allowing the use of coatings to an agreed specification in case where no EN, ISO or national standards are available for the coating material.

Within EN 545, section 4.6, coatings for fittings and accessories, an epoxy coating is mentioned under section 4.6.1, conforming to EN 14901.

The revision of EN 545 will take time to finalise. Hence, Plascoat has tested PPA 571 AQUA, a thermoplastic coating powder to meet the relevant routine and performance requirements of the material according to the subclauses of EN14901, these are shown in the table below.

PPA 571 AQUA conformance to EN 14901 requirement in EN 545

| | Parameter | Requirement | EN14901 Subclause | Test | PPA 571 AQUA |
|--------------------|---|------------------------------------|-------------------|--|--|
| Routine | Surface Preparation (EN ISO 8501-1) | SA 2.5 | 5.2 | Visual | Pass |
| | Appearance | Uniform colour and smooth | 5.3 | Visual | Pass |
| | Adhesion (EN ISO 4624) | Mean ≥ 8Mpa Single min. ≥ 6 Mpa | 5.4 | Punch separation method | ≥ 8Mpa |
| | Coating thickness | Min 250 um | 5.5 | Non destructive method | Mean 500 um Min. ≥ 350 um |
| | Cross Linkage | No deviation against reference | 5.6 | MIBK-Test | Not relevant. Specific to epoxy. |
| Performance | Impact resistance | No electrical puncture | 6.2 | Dropping weight. High voltage test. | ≥ 5Nm No puncture |
| | Indentation resistance | Depth ≤ 30% of initial thickness | 6.3 | Penetrometer at 70C | ≤ 30% after 48hrs |
| | Non porosity | No electrical puncture | 6.4 | Pass at 1500V. | Pass |
| | Cross linkage | Calibration | 6.5 | DSC test on reference sample | Not relevant. Specific to epoxy. |
| | Heat ageing in air | No electrical puncture | 6.6.2 | Hot air ageing of bent samples | Not relevant. Specific to epoxy. |
| | Heat ageing in water | Adhesion ≥ 6 Mpa | 6.6.3 | Ageing in 70C hot water | ≥ 6 Mpa |
| | Materials in contact with potable water (National Regulation) | According to national regulations | 6.9 | According to national regulations | National approvals available on request. |
| | Repairs | Compatible with parent coating | 5.7 | Visual | Pass |

Further and specific information on PPA571AQUA coating powders is provided on the technical datasheets. Information relating to potable water approvals is available upon request.

| | |
|--|--|
|  Dr S. Qureshi Technical Manager | DISCLAIMER The information given here is, to the best of our knowledge, true and accurate. Product and item design, pre-treatment, coating conditions, quality assurance and conditions of product end use are among the factors that affect performance of the coated products and are outside Plascoat's control. Conditions under which our materials may be used are beyond our control. The suitability for application and performance of finished goods coated with Plascoat material is the sole responsibility of the customer and end user. Plascoat expressly denies specific or implied warranties including warranties for fitness for a particular use or purpose. |
|--|--|