ABRASION RESISTANCE PROTECTO 401™ LINING IN PRODUCTION LINED DUCTILE IRON PIPE

EN 598 Section 7.8

The abrasion resistance of Protecto 401 was tested in 2021 and measured using the European Standard EN 598: Ductile iron pipe, fittings, accessories and their joints for sewerage applications-section 7.8 Abrasion Resistance. The test and results are described as follows:

7.8 Abrasion Resistance

The test shall be carried out on a pipe sample 1,000 mm + 10 mm long, closed at both ends after enclosing the test material; preferred sizes are DN 200 and DN 400.

Before test, the pipe section shall be immersed in water at ambient temperature for approximately 24 hours.

The test material shall contain natural siliceous gravel to reach a level of 38 mm ± 2 mm above the invert with enough water to reach the same level. The gravel particle size shall be between 2 mm and 10 mm, with an average size of approximately 6 mm.

The pipe sample shall be fixed horizontally on a testing device capable of inclining the sample successively to an angle of plus 22,5° and minus 22,5° every 3 s to 5 s.

The pipe sample shall be examined after 100,000 cycles; the depth of abrasion shall be the average of 15 measurements taken every 50 mm along 700 mm of the pipe invert, excluding 150 mm at both ends.

The loss of lining thickness shall be no more than described in Section 5.7 Abrasion resistance:

Section 5.7 Abrasion Resistance

When tested in accordance with 7.8, the pipes shall not have an abrasion depth greater than 0.6 mm after 100,000 cycles.

ALLOWABLE LOSS ONE HUNDRED THOUSAND CYCLES	PROTECTO 401™ LOSS ONE MILLION CYCLES
.6 mm (23.6 mils)	.05 mm (2 mils)