



Technical Bulletin

Accelerated Aging Test Results on AquaMaster™ RLLDPE

ECP produces a reinforced linear low density polyethylene (RLLDPE) geomembrane fabric in 24, 30, 36. The 24mil product is supplied with a 15 year warranty and the 30 and 36 mil products are supplied with a 20 year warranty.

One of the questions that we are commonly asked is how we know the materials will last as long as the warranty period. Since you cannot test a product outside for 20 years before you begin to sell it the industry relies on accelerated aging testing and high pressure – oxygen induction time (HP-OIT) as an indicator of the service life of the product. We have tested the HP-OIT of our products both in the as-manufactured state as well as after 1600 hours of QUV accelerated aging, according to GRI-GM11, and after 90 days of elevated heat exposure, 85°C – according to ASTM D5721-95. The table below gives the HP-OIT test results as well as the Geomembrane Research Institute (GRI) requirement. As you can see **AquaMaster™ RLLDPE** significantly exceeds the requirements of this test.

Table 1: HP-OIT Test Results in Minutes

	HP-OIT (minutes)			
	Initial	After QUV Aging	After Heat Aging	GRI Requirement
RLLDPE 24	1686	1388	1588	400
RLLDPE 30	1513	1465	1630	400
RLLDPE 36	1525	1395	1462	400

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