

PERMEABILITY LABORATORY TEST REPORT

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Prepared For: Newton Waterproofing Systems Ltd Newton House, 17-19 Sovereign Way Tonbridge, Kent TN9 1RH United Kingdom

Contact: Richard Crossley

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Versaperm Limited, 10 Rawcliffe House, Howarth Road, Maidenhead, Bucks, SL6 1AP, UK Tel +44 1628 777668 www.versaperm.com

Sample Identification

A kit of Newton 110 Watstop was received for testing.

Equipment used

Versaperm Permeability Meter MK IV, configured to run ISO15105-1 differential pressure method

Test Conditions

Sample Preparation: Samples were mixed as per the manufacturer's instructions, without the addition of water, and drawn down and allowed to set at room temperature for 48 hours. Sample Conditioning: Samples were stored for 14 days in a desiccator at 23°C. Temperature: 23°C

Atmospheric Pressure: Tested over several days.

Test Methods

Methane and Carbon DioxideTransmission Rate.

This test was carried out using the method ISO 15105-1 Plastics - Film and sheeting -Determination of gas-transmission rate - Part 1: Differential-pressure methods. After conditioning, each sample was placed in the standard film measuring chamber and controlled temperature environment, evacuating the gas from both sides of the sample, then supplying the test gas upstream of the sample at 1 bar differential pressure. The pressure downstream was monitored as the rate of change is proportional to the permeation rate. Results are expressed as ml.mm/m².day

Test Results

| Trade Name/ Identification | Nominal Thickness / mm | Methane Transmission Rate / ml.mm/m².day.atm | Carbon Dioxide Transmission Rate/ ml.mm/m².day.atm |
|-------------------------------|------------------------------|---|---|
| | | 23°C / 0%RH | 23°C / 0%RH |
| Newton 110 Watstop | 1.3 | 322 | 162 |

Conclusions

The sample demonstrates a good barrier to the gases tested.

Christopher Roberts Technical Director