



Sigma Energy Solutions
ABN: 77 104 097 298

LABORATORY REPORT - MATERIALS ANALYSIS
Re: AS 4040.4 RESISTANCE TO IMPACT (SANDBAG) OF
LASERLITE 8mm MAKROLON MULTIWALL SHEETING

To :	J. Heggen, A. Littlefield		
From :	J. Haig	Report Date :	15 September 2003
Customer Reference :		SIGMA Job No. :	740109 28/15
Method Reference :	AS/NZS 4040.4:1996 Methods of testing sheet roof and wall cladding. Method 4: Resistance to impact (sandbag) for sheet roof materials. AS/NZS 1562.3:1996 Design and installation of sheet roof and wall cladding. Part 3: Plastic		

Sample Description :	<p>Laserlite Makrolon Multiwall Roof Sheeting 8mm thick, Opal, 700mm wide was installed using</p> <ul style="list-style-type: none"> • H Bar, • Aluminium End Cap, • Noise Stop Tape, • C Gasket, and • End Gasket <p>in accordance with the supplier's instructions upon a timber roof test panel section as detailed in the sketch and table attached (Appendix A).</p>
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A 25 kg sandbag impact was applied to the test assembly detailed in Appendix A at a test position, #1, 300mm from a midspan batten/purlin midway between crests and in the centre of the test sheet. The results of the test were noted:

- No penetration
- No holing
- No fracture or splintering
- No vertical gap formation
- No damage to fixings.

When these results are considered under the requirements of AS 1562.3 cl. 5.2.3 Assessment (viz. No penetration, no fractures allowing a 75mm ball to pass, no shattering or splintering to produce splinters >250mm, no production of a vertical gap >300mm high between sheets), this test was assessed as a "pass".

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Re: AS 4040.4 RESISTANCE TO IMPACT (SANDBAG) OF
LASERLITE 10mm MAKROLON MULTIWALL SHEETING

To :	J. Heggen, A. Littlefield		
From :	J. Haig	Report Date :	22 August 2003
Customer Reference :		SIGMA Job No. :	740109 28/15
Method Reference :	AS/NZS 4040.4:1996 Methods of testing sheet roof and wall cladding. Method 4: Resistance to impact (sandbag) for sheet roof materials. AS/NZS 1562.3:1996 Design and installation of sheet roof and wall cladding. Part 3: Plastic		

Sample Description :	Laserlite Makrolon Multiwall Roof Sheeting 10mm thick, Opal, 980mm wide was installed using <ul style="list-style-type: none"> • H Bar, • Aluminium End Cap, • Noise Stop Tape, • C Gasket, and • End Gasket in accordance with the supplier's instructions upon a timber roof test panel section as detailed in the sketch and table attached (Appendix A).
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A 25 kg sandbag impact was applied to the test assembly detailed in Appendix A at a test position, #1, 300mm from the edge batten/purlin midway between crests and in the centre of the test sheet. The results of the test were noted:

- No penetration
- No holing
- No fracture or splintering
- No vertical gap formation
- No damage to fixings.

When these results are considered under the requirements of AS 1562.3 cl. 5.2.3 Assessment (viz. No penetration, no fractures allowing a 75mm ball to pass, no shattering or splintering to produce splinters >250mm, no production of a vertical gap >300mm high between sheets), this test was assessed as a "pass".