UKAS TESTING
2223

WINTECH

Test Report/Certificate No: **R1323/06/1091/Rev 1**

Date of Testing: **22nd August 2006**

3M United Kingdom Plc, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT

Ultra S400 (formerly known as SCLARL400) 100 micron Film (on 4mm Float Glass), has achieved Class 2B2 of BSEN 12600 'Glass in Building – Pendulum Test – Impact Test Method and Classification for Flat Glass'.

SAMPLE REFERENCE No.	IMPACTED SIDE OF SAMPLE	ALLOWABLE BREAKAGE MODE	PERFORMANCE CLASSIFICATION	DIMENSIONS OF TEST PIECES	RESULT
1	Film	B	----	876 x 1937	Pass (did not break)
2	Film	B	----	876 x 1937	Pass (did not break)
3	Film	B	----	876 x 1937	Pass (did not break)
5	Film	B	----	876 x 1937	Pass (did not break)
6	Glass	B	----	876 x 1937	Pass (did not break)
7	Glass	B	----	876 x 1937	Pass (did not break)
8	Glass	B	----	876 x 1937	Pass (broke in accordance with Clause 4)
9	Glass	B	3	876 x 1937	Pass (did not break)
1	Film	B	----	876 x 1937	Pass (did not break)
2	Film	B	----	876 x 1937	Pass (broke in accordance with Clause 4)
3	Film	B	----	876 x 1937	Pass (did not break)
5	Film	B	----	876 x 1937	Pass (did not break)
6	Glass	B	----	876 x 1937	Pass (broke in accordance with Clause 4)
7	Glass	B	----	876 x 1937	Pass (did not break)
9	Glass	B	----	876 x 1937	Pass (broke in accordance with Clause 4)
10	Glass	B	2	876 x 1937	Pass (broke in accordance with Clause 4)

These results are valid only for the conditions under which the tests were conducted.

Product Definition: Asymmetrical Product.

All Test Pieces and Safety Film were clamped in the test frame, as required by the test standard.

When tested by the method given in clause 4 in BSEN 12600 each test piece shall either not break or break as defined in the following way:
Numerous cracks appear but no shear or opening is allowed within the test piece through which a 76mm diameter sphere can pass when a maximum force of 25 N is applied. Additionally if particles are detached from the test piece up to 3 minutes after impact, they shall, in total, weigh no more than a mass equivalent to 10,000 mm² of the original test piece. The largest single particle shall weigh less than the mass equivalent to 400 mm² of the original test piece.

Tested By: M Cox and S Rice of Wintech Engineering Ltd.

Testing Witnessed By: Brian Wong of 3M United Kingdom Plc

Report Compiled By: T A Speak Signed: T A Speak

Technically Approved By: R W Withers, Technical and Quality Manager Signed:

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