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# WINTTECH

Test Report/Certificate No: R1333/06/1091/Rev 1

Date of Testing: 11<sup>th</sup> September 2006

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

**Ultra Silver S20 (formerly known as S20SIAR400) 100 micron Film** (on 6mm 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)                     |
| 3                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 4                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 5                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 9                    | Glass                   | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 10                   | Glass                   | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 11                   | Glass                   | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 12                   | Glass                   | B                       | 3                          | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 1                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 6                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 7                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 8                    | Film                    | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 13                   | Glass                   | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 14                   | Glass                   | B                       | ---                        | 876 x 1937                | Pass (did not break)                     |
| 15                   | Glass                   | B                       | ---                        | 876 x 1937                | Pass (broke in accordance with Clause 4) |
| 16                   | Glass                   | B                       | 2                          | 876 x 1937                | Pass (did not break)                     |

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 mm<sup>2</sup> of the original test piece. The largest single particle shall weigh less than the mass equivalent to 400 mm<sup>2</sup> of the original test piece.

Tested By: M Cox and D Cox of Wintech Engineering Ltd.

Testing Witnessed By:

Report Compiled By: T A Speak

Signed:

Technically Approved By: R W Withers  
Technical and Quality Manager

Signed:

Date of Issue: 13<sup>th</sup> October 2006

This report and the results shown are based upon information, samples supplied and tests referred to above. The results obtained do not necessarily relate to samples from the production line of the above named company and in no way constitute any form of representation or warranty as to the performance or quality of any products supplied or to be supplied by them. Wintech Engineering Ltd or its employees accept no liability for any damages, charges, cost or expenses in respect of or in relation to any damage to any property or other loss whatsoever arising either directly or indirectly from the use of this report.

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