



This is to certify that:

Ravensby Glass Company Limited Fowler Road West Pitkerro Industrial Estate Dundee DD5 3RU United Kingdom

Holds Certificate Number:

KM 54502

In respect of:

Safety glass Safety glass for use in buildings - BS EN 12150 - 1, BS EN 14179 - 1 and BS EN 14449

This issues the right and licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Certificate shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Certificate provided at or from the above address.

For and on behalf of BSI:

Chris Lewis - Certification Director, Product Certification

First Issued: 2000-08-04 Latest Issue: 2019-09-09 Effective Date: 2019-09-09 Expiry Date: 2022-09-08

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...making excellence a habit."

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BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.

No. KM 54502

BS EN 12150-1:2015 - Thermally toughened soda lime silicate safety glass

| Thickness (mm) | Tolerance (mm) |
|----------------|----------------|
| 4.0 | ±0.2 |
| 5.0 | ±0.2 |
| 6.0 | ±0.2 |
| 8.0 | ±0.3 |
| 10.0 | ±0.3 |
| 12.0 | ±0.3 |
| 15.0 | ±0.5 |
| 19.0 | ±1.0 |

Clear/tinted toughened glass meeting Impact Class 1 (BS EN 12600)

Coated toughened glass meeting Impact Class 1 (BS EN 12600)

| Coating | Thickness (mm) | Tolerance (mm) |
|------------------|----------------|----------------|
| Planitherm 1.2 | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Climaguard range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|----------------------------|----------------|----------------|
| Guardian SunGuard SN range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Planitherm Ultra NII | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Planitherm One II | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Cool-Lite SKN range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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No. KM 54502

Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|-------------------------------|----------------|----------------|
| Cool-Lite Xtreme range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard HP range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard HD range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard Solar range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|-----------------------------------|----------------|----------------|
| Cool-Lite ST150 | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| Guardian SunGuard Extra Selective | 4.0 | ±0.2 |
| range | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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Modified toughened glass meeting Impact Class 1 (BS EN 12600).

| Glass Type | Thickness (mm) | Tolerance (mm) |
|-------------------|----------------|----------------|
| Satin acid etched | 4.0 | ±0.2 |
| Satin acid etched | 6.0 | ±0.2 |
| Satin acid etched | 8.0 | ±0.3 |
| Satin acid etched | 10.0 | ±0.3 |

Patterned toughened glass meeting Impact Class 1 (BS EN 12600) in 4 and 6mm thickness.

| Artic | Cotswold | Florielle | Pelerine | Canterbury |
|-----------------|-----------|-----------|------------|------------|
| Autumn | Digital | Mayflower | Stippolyte | |
| Chantilly | Everglade | Minster | Sycamore | |
| Charcoal Sticks | Flemish | Oak | Tafetta | |

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No. KM 54502

Laminated glass and laminated safety glass. BS EN 14449:2005 -

Clear/coated laminated float safety glass meeting Impact Class 1 (BS EN 12600) using Trosifol PVB Interlayer with the following thickness combinations:

| Glass Thickness (mm) | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 19 | |
|----------------------------|------|------|------|------|------|------|------|------|-------------------------|
| 4 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| - | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 5 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 6 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 8 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | Interlayer Thickness |
| 10 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | (mm) |
| 10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 12 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 12 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 15 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 15 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 19 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 15 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |

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No. KM 54502

BS EN 14449:2005 - Laminated glass and laminated safety glass.

Clear/coated laminated float safety glass meeting Impact Class 1 (BS EN 12600) using EVALAM Interlayer with the following thickness combinations:

| Glass Thickness (mm) | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 19 | |
|----------------------------|------|------|------|------|------|------|------|------|-------------------------|
| 4 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 5 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 6 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 8 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | Interlayer Thickness |
| 10 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | (mm) |
| 10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 12 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 12 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 15 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 13 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 19 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 19 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |

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No. KM 54502

BS EN 14449:2005 - Laminated glass and laminated safety glass.

Clear/coated laminated float safety glass meeting Impact Class 1 (BS EN 12600) using UNILAM EVA Interlayer with the following thickness combinations:

| Glass Thickness (mm) | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 19 | |
|----------------------------|------|------|------|------|------|------|------|------|-------------------------|
| 4 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| - | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 5 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 6 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 8 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | Interlayer Thickness |
| 10 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | (mm) |
| 10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 12 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 12 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 15 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 51 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 19 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 19 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |

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No. KM 54502

Laminated glass and laminated safety glass. BS EN 14449:2005 -

Clear/coated laminated float safety glass meeting Impact Class 1 (BS EN 12600) using Saflex RB41 PVB Interlayer with the following thickness combinations:

| Glass Thickness (mm) | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 19 | |
|----------------------------|------|------|------|------|------|------|------|------|-------------------------|
| 4 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| - | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 5 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 6 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 8 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | Interlayer Thickness |
| 10 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | (mm) |
| 10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 12 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 12 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 15 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 15 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 19 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 19 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |

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No. KM 54502

BS EN 14449:2005 - Laminated glass and laminated safety glass.

Clear/coated laminated float safety glass meeting Impact Class 1 (BS EN 12600) using Saflex DG41 PVB Interlayer with the following thickness combinations:

| Glass Thickness (mm) | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 19 | |
|----------------------------|------|------|------|------|------|------|------|------|-------------------------|
| 4 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| - | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 5 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 6 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 0 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 8 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | Interlayer Thickness |
| 10 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | (mm) |
| 10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 12 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 12 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 15 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 15 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |
| 19 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | |
| 19 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | |

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No. KM 54502

Ravensby Glass Co Ltd Unit 8 **Tom Johnston Road** Dundee **DD4 8XG**

BS EN 14179-1:2016 - Heat soaked thermally toughened soda lime silicate safety glass

Clear/tinted toughened glass meeting Impact Class 1 (BS EN 12600)

| Thickness (mm) | Tolerance (mm) |
|----------------|----------------|
| 4.0 | ±0.2 |
| 5.0 | ±0.2 |
| 6.0 | ±0.2 |
| 8.0 | ±0.3 |
| 10.0 | ±0.3 |
| 12.0 | ±0.3 |
| 15.0 | ±0.5 |
| 19.0 | ±1.0 |

Coated toughened glass meeting Impact Class 1 (BS EN 12600)

| Coating | Thickness (mm) | Tolerance (mm) |
|----------------|----------------|----------------|
| Planitherm 1.2 | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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No. KM 54502

BS EN 14179-1:2016 - Heat soaked thermally toughened soda lime silicate safety glass Modified toughened glass meeting Impact Class 1 (BS EN 12600)

| Coating | Thickness (mm) | Tolerance (mm) |
|---------|----------------|----------------|
| Satin | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |

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No. KM 54502

Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|----------------------------|----------------|----------------|
| Climaguard range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard SN range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Planitherm Ultra NII | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Planitherm One II | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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No. KM 54502

Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|-------------------------------|----------------|----------------|
| Cool-Lite SKN range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Cool-Lite Xtreme range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard HP range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard HD range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |
| Guardian SunGuard Solar range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

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No. KM 54502

Coated toughened glass meeting Impact Class 1 (BS EN 12600) (continued)

| Coating | Thickness (mm) | Tolerance (mm) |
|---|----------------|----------------|
| Cool-Lite ST150 | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| Guardian SunGuard Extra Selective range | 4.0 | ±0.2 |
| | 6.0 | ±0.2 |
| | 8.0 | ±0.3 |
| | 10.0 | ±0.3 |
| | 12.0 | ±0.3 |

Modified toughened glass meeting Impact Class 1 (BS EN 12600).

| Glass Type | Thickness (mm) | Tolerance (mm) |
|-------------------|----------------|----------------|
| Satin acid etched | 4.0 | ±0.2 |
| Satin acid etched | 6.0 | ±0.2 |
| Satin acid etched | 8.0 | ±0.3 |
| Satin acid etched | 10.0 | ±0.3 |

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