NZTA M25: 2021

Test Summary Certificate Templates (editable)

**October 2021**

**VERSION 1.0**



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Waka Kotahi NZ Transport Agency
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Wellington 6141

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Published October 2021

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| **RECORD OF AMENDMENTS** |
| **Primary Document** | M25 Specification for retroreflective sheeting |
| **Amendment Number** | **Subject** | **Effective Date** | **Updated by** |
| Version 0 | M25:2019 Retroreflective sheeting-Certificate SET  |  April 2019 | Ron Minnema |
| Version 1 | **Introduction:**M25:2021 Test summary certificate templates**Withdrawn:**M25:2019 Retroreflective sheeting-Certificate SET | October 2021 | Julian Chisnall |
|  |  |  |  |

These templates must be used to confirm test results for retroreflective sheeting with Waka Kotahi NZ Transport Agency in accordance with NZTA M25 *Specification for retroreflective sheeting*. Waka Kotahi will not accept original detailed client test reports that require Waka Kotahi staff to adjudge test results.

Confirmation of *Interim Approval* and *Approved Material* status for retroreflective sheeting for use in the manufacture of permanent and temporary traffic signs will be confirmed only after being confirmed in the New Zealand Gazette “*Reflectorised Material Approved for Use on Traffic Signs*”. Confirmation of *Approved Material* status for retroreflective sheeting for use in the manufacture of registration plates will be confirmed only after being confirmed in NZTA M25 *Listing of approved registration plate sheeting*.

The completion of the *Test Summary Certificates* must be according to the requirements specified in Appendix A, NZTA M25 *Specification for retroreflective sheeting*

|  |  |
| --- | --- |
|  Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017  **Original Factory Sheeting** Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:** |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |  |
| *Brand; Sheeting Series; Colours + #(s)* |
| **Retroreflective Class Tested to** |  |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| 1 | 2.1 | *Photometric Performance* *R*A  |  |
| 2 | 2.2.2(a)(i) | *Chromaticity - Daylight colour*  |  |
| 3 | 2.2.2(a)(ii) | *Chromaticity - Retroreflective Colour* |  |
| 4 | 2.2.2(b) | *Luminance Factor - Standard colour* |  |
| 5 | 2.2.2(b) | *Luminance Factor - Fluorescent colour* |  |
| 6 | 2.3 | *Rainfall Performance* (Optional for sign sheeting) |  |
| 7 | 2.4.1 | *Tensile strength & Elongation* |  |
| 9 | 2.4.2 | *Impact Test* |  |
| 11 | 2.4.3 | *Scratch resistance* |  |
| 13 | 2.4.5 | *Solvent resistance* |  |
| 14 | 2.5.1 |  *Application* |  |
| 15 | 2.5.2 | *Adhesive Bond*  |  |
| 16 | 2.5.3 | *Protective liner* |  |
| 17 | 2.11 | *Retroreflective Sheeting Identification* |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  |  | Years: Start Date |  |
|  | MJ/m2 Req’d: Achieved |  |
| 18 | 2.6.2(a) | *Test panel removability* |  |
| 19 | 2.6.2(b) | *Cracking; crazing; peeling; blistering; delam* |  |
| 20 | 2.6.2(c) | *Shrinking; edge lifting* |  |
| 21 | 2.6.2(d) | *Edge damage; corrosion* |  |
| 22 | 2.6.2(e) | *Residual photometric performance RA* |  |
| 23 | 2.6.2(f) | *Clause 2.2.2(a) Chromaticity: Daylight*  |  |
| 24 | *Clause 2.2.2(a) Chromaticity Retroreflective* |  |
| 25 | *Clause 2.2.2(b) Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |

|  |  |
| --- | --- |
| Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017  **Colour Processed** (screen printing ink) Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:**  |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |  |
| *Brand; Sheeting Series; Colours + #(s)* |
| **Retroreflective Class Tested to** |   |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| 2 | 2.7.2(a) | 2.2.2(a)(i) *Chromaticity - Daylight colour*  |  |
| 3 | 2.7.2(a) | 2.2.2(a)(ii) *Chromaticity - Retroreflective Colour* |  |
| 4 | 2.7.2(a) | 2.2.2(b) *Luminance Factor - Standard colour* |  |
| 1 | 2.7.2(a)(i) | 2.1 *Photometric Performance* *R*A. (Ink 70%) |  |
| 6  | 2.7.2(b) | 2.4 *Base white sheeting* - *physical properties*  |  |
|  (2.4.1; 2.4.2; 2.4.5; plus 2.3Optional Rainfall Performance) |
| 7 | 2.7.2(c) | 2.4.1 *Tensile strength & Elongation* (Process colour area) |  |
| 9 | 2.7.2(c) | 2.4.2 *Impact Test* (Process colour area) |  |
| 10 | 2.7.2(c) | 2.4.4 *Adhesion cross cut test* (Screen print ink) |  |
| 14 | 2.5.1 | *Application* (Confirm base sheeting complies) |  |
| 15 | 2.5.2 | *Adhesive Bond* (Confirm base sheeting complies) |  |
| 16 | 2.5.3 | *Protective liner* (Confirm base sheeting complies) |  |
| 17 | 2.11 | *Sheeting Identification* (Confirm base sheeting complies) |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  |  | Years: Start Date |  |
|  | MJ/m2 Req’d: Achieved |  |
| 18 | 2.7.2(d) | 2.6.2(a) *Test panel removability* (Base sheeting) |  |
| 19 | 2.7.2(d) | 2.6.2(b) *Cracking; crazing etc* (Base sheeting) |  |
| 20 | 2.7.2(d) | 2.6.2(c) *Shrinking; edge lifting* (Base sheeting) |  |
| 21 | 2.7.2(d) | 2.6.2(d) *Edge damage; corrosion* (Base sheeting) |  |
| 26 | 2.7.2(d)(i) | *Process colour cracking crazing peeling lifting etc* |  |
| 22 | 2.7.2(d) | 2.6.2(e) *Residual photometric performance RA* (70%) |  |
| 23 | 2.7.2(d)(ii) | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Daylight*  |  |
| 24 | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Retroreflective* |  |
| 25 | 2.6.2(f) *Clause 2.2.2(b) Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |

|  |  |
| --- | --- |
| Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017  **Colour processed** (Colour Overlay Film ECF) Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:**  |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |  |
| *Brand; Sheeting Series; Colours + #(s)* |
| **Retroreflective Class Tested to** |   |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| 2 | 2.7.2(a) | 2.2.2(a)(i) *Chromaticity - Daylight colour*  |  |
| 3 | 2.7.2(a) | 2.2.2(a)(ii) *Chromaticity - Retroreflective Colour* |  |
| 4 | 2.7.2(a) | 2.2.2(b) *Luminance Factor - Standard colour* |  |
| 1 | 2.7.2(a)(i) | *2.1 Photometric Performance* *R*A. (ECF 90%) |  |
| 6 | 2.7.2(b) | 2.4 *Base white sheeting* - *physical properties* (2.4.1; 2.4.2; 2.4.5; *plus* 2.3 *Optional Rainfall Performance*) |  |
| 7 | 2.7.2(c) | 2.4.1 *Tensile strength & Elongation* (Process colour area) |  |
| 9 | 2.7.2(c) | 2.4.2 *Impact Test* (Process colour area) |  |
| 10 | 2.7.2(c) | 2.4.3 *Scratch resistance* (Colour overlay film ECF) |  |
| 11 | 2.7.2(c) | 2.4.5 *Solvent resistance* (Colour overlay film ECF) |  |
| 14 | 2.5.1 | *Application* (Confirm base sheeting complies) |  |
| 15 | 2.5.2 | *Adhesive Bond* (Confirm base sheeting complies) |  |
| 16 | 2.5.3 | *Protective liner* (Confirm base sheeting complies) |  |
| 17 | 2.11 | *Sheeting Identification* (Confirm base sheeting complies) |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  |  | Years: Start Date |  |
|  | MJ/m2 Req’d: Achieved |  |
| 18 | 2.7.2(d) | 2.6.2(a) *Test panel removability* (Base sheeting) |  |
| 19 | 2.7.2(d) | 2.6.2(b) *Cracking; crazing etc* (Base sheeting) |  |
| 20 | 2.7.2(d) | 2.6.2(c) *Shrinking; edge lifting* (Base sheeting) |  |
| 21 | 2.7.2(d) | 2.6.2(d) *Edge damage; corrosion* (Base sheeting) |  |
| 26 | 2.7.2(d)(i) | Process colour Cracking crazing etc |  |
| 22 | 2.7.2(d)(ii) | 2.6.2(e) *Residual photometric performance RA* (90%) |  |
| 23 | 2.7.2(d)(ii) | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Daylight*  |  |
| 24 | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Retroreflective* |  |
| 25 | 2.6.2(f) *Clause 2.2.2(b) Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |

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| --- | --- |
| Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017  **Colour Processed** (Digital Print Ink & Clear Overlay) Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:**  |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |   |
| *Brand; Sheeting Series; Colours + #(s)* |
| **Retroreflective Class Tested to** |  |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| 2 | 2.7.2(a) | 2.2.2(a)(i) *Chromaticity - Daylight colour*  |  |
| 3 | 2.7.2(a) | 2.2.2(a)(ii) *Chromaticity - Retroreflective Colour* |  |
| 4 | 2.7.2(a) | 2.2.2(b) *Luminance Factor - Standard colour* |  |
| 1 | 2.7.2(a)(i) | *2.1 Photometric Performance* *R*A. (Ink 70%) |  |
| 6 | 2.7.2(b) | 2.4 *Base white sheeting* - *physical properties* (2.4.1; 2.4.2; 2.4.5; *plus* 2.3 *Optional Rainfall Performance*) |  |
| 7 | 2.7.2(c) | 2.4.1 *Tensile strength & Elongation* (*Colour process area*) |  |
| 9 | 2.7.2(c) | 2.4.2 *Impact Test* (*Colour process area*) |  |
| 10 | 2.7.2(c) | 2.4.3 *Scratch resistance* (Not req’d for Dew Resistant overlay) |  |
| 11 | 2.7.2(c) | 2.4.5 *Solvent resistance* (Not req’d for Dew Resistant overlay) |  |
| 14 | 2.5.1 | *Application* (Confirm base sheeting complies) |  |
| 15 | 2.5.2 | *Adhesive Bond* (Confirm base sheeting complies) |  |
| 16 | 2.5.3 | *Protective liner* (Confirm base sheeting complies) |  |
| 17 | 2.11 | *Sheeting Identification* (Confirm base sheeting complies) |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  |  | Years: Start Date |  |
|  | MJ/m2 Req’d: Achieved |  |
| 18 | 2.7.2(d) | 2.6.2(a) *Test panel removability* (Base sheeting) |  |
| 19 | 2.7.2(d) | 2.6.2(b) *Cracking; crazing etc* (Base sheeting) |  |
| 20 | 2.7.2(d) | 2.6.2(c) *Shrinking; edge lifting* (Base sheeting) |  |
| 21 | 2.7.2(d) | 2.6.2(d) *Edge damage; corrosion* (Base sheeting) |  |
| 26 | 2.7.2(d)(i) | Process colour Cracking crazing etc |  |
| 22 | 2.7.2(d)(ii) | 2.6.2(e) *Residual photometric performance RA* (70%) |  |
| 23 | 2.7.2(d)(ii) | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Daylight*  |  |
| 24 | 2.6.2(f) *Clause 2.2.2(a) Chromaticity: Retroreflective* |  |
| 25 | 2.6.2(f) *Clause 2.2.2(b) Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |

|  |  |
| --- | --- |
|  Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017 Number Plate Factory Sheeting Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:**  |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |   |
| *Brand; Sheeting Series; Colour#(s)* |
| **Retroreflective Class Tested to** |  |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| NP1 | 3.1.1 | *Photometric Performance* *R*A  |  |
| NP2 | 3.1.2 | *Photometric variation with Rotation* |  |
| NP3 | 3.2(a) | *Chromaticity - Daylight colour* |  |
| NP4 | 3.2(b) | *Chromaticity – Retroreflective Colour* |  |
| NP5 | 3.2 | *Luminance Factor – Daylight Colour* |  |
| NP6 | 3.3 | *Rainfall Performance* (COMPULSORY for NP sheeting) |  |
| NP7 | 3.4.1(a) or (b) | *Tensile Strength & Elongation*  |  |
| NP8 | 3.4.2 | *Impact Test*  |  |
| NP9 | 3.4.3 | *Scrub Abrasion Test*  |  |
| NP10 | 3.4.4 | *Solvent resistance* (Photometric *R*A White Only) |  |
| NP11 | 3.4.4 | *Solvent resistance* (Day colour and luminance) |  |
| NP12 | 3.5 | *2.5.1 Application* |  |
| NP13 | 3.5 | *2.5.2 Adhesive Bond* (Dry sheeting) |  |
| NP14 | 3.5 | *2.5.3 Protective liner* |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  | **2** | Years: Start Date |  |
| 15,000 | MJ/m2 Req’d: Achieved |  |
| NP18 | 3.6 | 2.6.2(a) *Test panel removability* |  |
| NP19 | 3.6 | 2.6.2(b) *Cracking; crazing; peeling; blistering; delam* |  |
| NP20 | 3.6 | 2.6.2(c) *Shrinking; edge lifting* |  |
| NP21 | 3.6 | 2.6.2(d) *Edge damage; corrosion* |  |
| NP22 | 3.6 | *Residual photometric performance RA* |  |
| NP23 | 3.2(a) *Colourfastness Chromaticity daylight* |  |
| NP24 | 3.2(b) *Colourfastness Chromaticity Retroflection* |  |
| NP25 | *Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |

|  |  |
| --- | --- |
|  Retroreflective sheeting Test Summary CertificateNo.:AS 1906.1:2017 Number Plate Colour Processed Sheeting Date**:** |  |
|  |
| **Testing Laboratory:** |  | **Supporting Lab Report Number(s):** |
|  |
|  **Address:**  |  | **Phone:**  |  |
| **Sheeting Manufacturer:** |  |
| *Including Street Address and City* |
| **Sheeting Tested:** |   |
| *Brand; Sheeting Series; Colour#(s)* |
| **Retroreflective Class Tested to** |  |
| *Class Number; Class Name; Standard Table No* |
| Line | Clause | Description | Pass-Uncertain-Not Tested-N/A |
| NP1 | 3.7.2(a)(i) | 3.1.1 *Photometric Performance* *R*A (Process Ink Colour) |  |
| NP2 | 3.7.2(a)(ii) | 3.1.1 *Photometric Performance* *R*A (Overlay Film Colour) |  |
| NP3 | 3.7.2 | 3.1.2 *Photometric variation with Rotation* (Base shtg only) |  |
| NP4 | 3.7.2(a) | 3.2(a) *Chromaticity – Daylight Colour*  |  |
| NP5 | 3.7.2(a) | 3.2(a) *Chromaticity - Retroreflected colour* |  |
| NP6 | 3.7.2(a) | *Luminance Factor – Daylight Colour* |  |
| NP7 | 3.7.2(b) | 2.4.4 *Adhesion Cross Cut Test* (Process Ink Only) |  |
| NP9 | 3.7.2(c) | 3.3 *Rainfall Performance* (COMPULSORY for NP sheeting) |  |
| NP11 | 3.7.2(c) & (d) | 3.4.1 *Tensile strength & Elong* (Base Sheet & colour area) |  |
| NP13 | 3.7.2(c) & (d) | 3.4.2 *Impact Test* (Base Sheeting and colour area) |  |
| NP14 | 3.7.2(c) & (d) | 3.4.3 *Scrub Abrasion Test* (Base Sheeting only) |  |
| NP15 | 3.7.2(c) & (d) | 3.4.4 *Solvent resistance* (*R*A Base White Sheeting only) |  |
| NP16 | 3.7.2(c) & (d) | 3.4.4 *Solvent resistance* (Day colour & Luminance only) |  |
| OUTDOOR WEATHERING ALLUNGA  | Approx  | **2** | Years: Start Date |  |
| 15,000 | MJ/m2 Req’d: Achieved |  |
| NP18 | 3.7.2(e) | 3.6/2.6.2(a) *Test panel removability* (Base Sheeting) |  |
| NP19 | 3.7.2(e) | 3.6/2.6.2(b) *Crack/craze etc* (Base sheeting) |  |
| NP20 | 3.7.2(e) | 3.6/2.6.2(c) *Shrinking; edge lifting* (Base Sheeting) |  |
| NP21 | 3.7.2(e) | 3.6/2.6.2(d) *Edge damage; corrosion* (Base Sheeting) |  |
| NP22 | 3.7.2(e)(i)  | *Process colour cracking, crazing, peeling, blistering* |  |
| NP23 | 3.7.2(e)(ii)  | *Residual photometric performance RA (to 50%)* |  |
| NP24 | *Colourfastness – Clause 3.2 Chromaticity daylight* |  |
| NP25 | *Colourfastness – Clause 3.2 Chromaticity retro* |  |
| NP26 | *Luminance factor – Clause 3.2 Luminance factor* |  |
|  | **Tested by:** | **Approved by:** |
| **Signature** |  |  |
| **Print** |  |  |
| **Title** |   |   |