TEST METHOD T1412

IMPACT TEST ON RETRO-REFLECTIVE SHEETING

REVISION SUMMARY

Date	Clause Number	Description of Revision	Authorised By Gen Mgr Pavements
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TEST METHOD T1412

IMPACT TEST ON RETRO-REFLECTIVE SHEETING

1. SCOPE:

This test method sets out the procedure for assessing the resistance to impact of retro-reflective sheeting at normal and low temperature. This method conforms with Australian Standard 1906.

2. APPARATUS:

(a) Steel rod plunger with a mass of 1 kg shaped with a 15 mm diameter hemi-spherical tip.

(b) A graduated guide tube 16 mm in diameter.

(c) A support for the sample consisting of an annular die with an internal diameter of 16 mm which is located centrally under the plunger.

(d) A steel roller 83 ± 2 mm diameter and 45 ± 2 mm wide covered with rubber approximately 5 mm thick having a Shore durometer hardness of 80 ± 5. The mass of the roller to be 2.0 ± 0.1 kg. This roller to be used for the pressure application of simple pressure - adhesive material.

(e) Stainless steel strip 200 mm long by 25 mm wide and 0.900 mm thick, polished to a mirror finish and consisting of 18/8 Austenitic grade steel to AS G31/302 in a degreased condition.

3. PREPARATION AND CONDITIONING OF THE SAMPLES:

(a) Prepare the samples by mounting on the stainless steel strips in the manner recommended by the manufacturer for the material under test. The simple pressure-adhesive material to be mounted by use of the rubber coated steel roller described in 2(d) above.

Condition the samples to be tested at normal temperature by storing in an air-conditioned chamber at a temperature of 20 ± 2°C and a relative humidity of 50 ± 5 percent. Carry out the normal temperature impact test under the same conditions.

4. CONDITIONS OF TEST:

The following table shows the test plunger height for each class of material in both the normal and low temperature conditions:

Class of Material	Temperature of Test °C	Plunger height mm
1	20 ± 2	180
	0	130
2 and 3	20 ± 2	100
	0	50

5. PROCEDURE:

5.1. Normal Temperature Test (20 ± 2ºC):

(a) Position the prepared sample over the die support in a room controlled to temperature of 20 ± 2ºC with the back of the prepared panel uppermost.

(b) Release the plunger from the height specified in the table above.

(c) Examine the domed area on the test piece for signs of cracking, crazing or lifting from the test panel.

5.2. Low Temperature Test:

(a) Immerse the mounted sample in an ice/water mixture at 0ºC for at least one minute.

(b) Remove from the ice/water mixture, place on the die support with the back of the prepared sample uppermost.

(c) Release the plunger from the height specified in the table above.

(d) Examine the resulting domed area on the test piece for signs of cracking, crazing or lifting from the test panel.

6. Reporting

Report as ‘Pass or Fail’ at the particular temperature of test. In the case of failure describe the type of failure.