

TEST DATA SHEET

Material Tested: King Tech Industry Corporation KT8021 High-Visibility Retroreflective Trim

Retroreflective Performance, Initial

Requirement: ANSI/ISEA 107-2004 8.1

Test Method: ASTM E808/E809

Measured Coefficient of Retroreflection in $cd/(lx \cdot m^2)$

Product	High Visibility Trim							
Observation Angle	Entrance Angle ($\epsilon_1 = 0^\circ$)				Entrance Angle ($\epsilon_2 = 90^\circ$)			
	5°	20°	30°	40°	5°	20°	30°	40°
12'	437.0	383.7	353.6	305.0	439.4	385.0	350.7	305.8
20'	289.5	258.8	238.6	211.4	291.0	260.3	236.9	211.7
1°	50.9	51.0	47.3	33.6	49.2	48.4	45.3	34.6
1°30'	16.0	16.6	16.6	14.8	16.3	17.1	17.1	15.4

Note: Sample area = $0.438ft^2$.

Level 2 Requirements for Coefficient of Retroreflection in $cd/(lx \cdot m^2)$

Observation Angle	Entrance Angle ($\epsilon_1 = 0^\circ$ or 90°)				Entrance Angle ($\epsilon_2 = 0^\circ$ or 90°)			
	5°	20°	30°	40°	5°	20°	30°	40°
12'	330	290	180	65	247.5	217.5	135.0	48.8
20'	250	200	170	60	187.5	150.0	127.5	45.0
1°	25	15	12	10	18.8	11.3	9.0	7.5
1°30'	10	7	5	4	7.5	5.3	3.8	3.0

Comments: Samples meet all requirements for Level 2 reflectivity.
Vertical position = 0° / Horizontal position = 90°

TEST DATA SHEET

Material Tested: King Tech Industry Corporation KT8021 High-Visibility Retroreflective Trim

Abrasion

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.1
EN 530:1994, Method 2 (Wool Abradent / 5000 Cycles / 9kPa)

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	423.9	100	419.9	75

Comments: Tested in triplicate. Samples meet all abrasion requirements.
Sample area = 0.111ft².

Flexing

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.2
ISO 7854:1997 Method A (7500 Cycles)

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	306.1	100	304.0	75

Comments: Tested in triplicate. Samples meet all flexing requirements.
Sample Area = 0.198ft².

TEST DATA SHEET

Material Tested: King Tech Industry Corporation KT8021 High-Visibility Retroreflective Trim

Folding at Cold Temperatures

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.3
ISO 4675:1990 (-20°C)

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	420.6	100	423.7	75

Comments: Tested in triplicate. Samples meet all folding requirements. Sample Area = 0.056ft².

Exposure to Temperature Variation

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.4
12 Hours at 50°C / 20 Hours at -30°C / 2 Hours at 20°C

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	443.8	100	445.6	75

Comments: Tested in triplicate. Samples meet all temperature variation requirements. Sample Area = 0.098ft².

TEST DATA SHEET

Material Tested: King Tech Industry Corporation KT8021 High-Visibility Retroreflective Trim

Washing (Domestic)

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.6
ISO 6330:2000 Method 2A

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Number of Wash Cycles: 10				
Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	387.6	100	387.3	75

Comments: Tested in triplicate. Samples meet all domestic washing requirements when washed 10 times. Average sample Area = 0.132ft².

Dry-cleaning

Requirement: ANSI/ISEA 107-2004 8.2.1

Test Method: ANSI/ISEA 107-2004 9.4.7
ISO 3175:1998 Method 8.1

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Number of Dry-cleaning Cycles: 0				
Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	N/A	100	N/A	75

Comments: Device not tested for dry-cleaning resistance.

TEST DATA SHEET

Material Tested: King Tech Industry Corporation KT8021 High-Visibility Retroreflective Trim

Retroreflective Performance in Rainfall

Requirement: ANSI/ISEA 107-2004 8.2.1

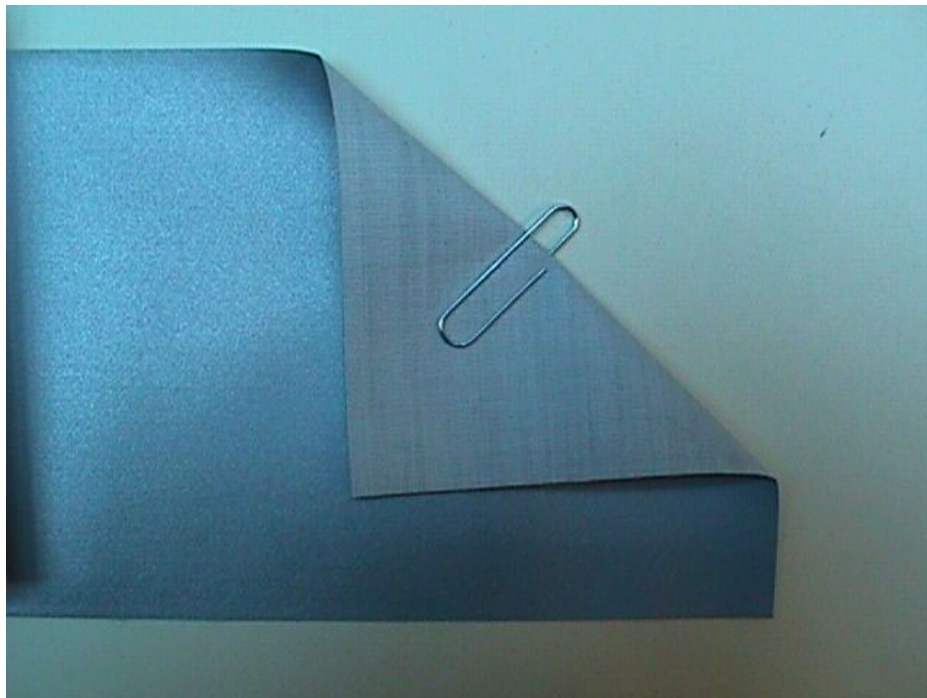
Test Method: ANSI/ISEA 107-2004 9.4.8

After exposure each test specimen shall fulfill the photometric requirements of Section 8.2.1.

Post Exposure Coefficient of Retroreflection (R_A) - cd/(lx*m ²)				
Observation Angle = 12'				
Entrance Angle = 5°				
Product	$\epsilon_1 = 0^\circ$		$\epsilon_2 = 90^\circ$	
	Measured	Required	Measured	Required
High Visibility Trim	192	100	176	75

Comments: Sample meets all rainfall requirements. Sample Area = 0.438ft².

Photograph of Product



Typical product sample