



INDUSTRIAL TESTING LABORATORY

Report No. 061019-01A

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**TEST REPORT**

Report Date: 10 November 2006

Material Tested: King Tech Industries Reflective Fabrics  
8003 Breathable Reflective Fabric

Submitted by: King Tech Industries  
San Diego, CA 92122

Test Laboratory: Calcoast - ITL  
Emeryville, CA 94608

Product: Breathable Fabric with Reflective Coating

**SUMMARY**

Specification: ANSI/ISEA 107-2004  
American National Standard for High-Visibility Safety Apparel  
Retroreflective Material, Level 1 or 2

Photometric Performance, Initial

Level 2..... **FAILED**  
Level 1..... Passed

Retroreflection after Test Exposure

Abrasion..... Not Tested  
Flexing..... Not Tested  
Folding at Cold Temperatures..... Not Tested  
Exposure to Temperature Variation..... Not Tested  
Washing (50X)..... Not Tested  
Dry-cleaning (0X)..... Not Tested  
Retroreflective Performance in Rainfall..... Not Tested

Signature of Responsible Laboratory Official:

Douglas G. Cummins  
Photometric Engineer

**TEST DATA SHEET**

Material Tested: King Tech Industries Reflective Fabrics  
8003 Breathable Reflective Fabric

**Retroreflective Performance, Initial**

Requirement: ANSI/ISEA 107-2004 8.1 Table 5 (Level 1), Table 6 (Level 2)  
Test Method: ASTM E808/E809

200 mm x 200 mm retroreflective samples were cut from submitted fabric. Measured samples at orientations of  $\epsilon_1 = 0^\circ$  and  $\epsilon_2 = 90^\circ$  where  $\epsilon_1$  mounting orientation is with the reflective diamond's long axis parallel to the projector/detector plane.

Sample Area: 0.0400 m<sup>2</sup>  
Coefficient of Retroreflection, Candela/Lux/m<sup>2</sup>

Observation Angle	Entrance Angle	Minimum Requirement		Measured	
		Level 2	Level 1	$\epsilon_1$	$\epsilon_2$
12' (0.20°)	5°	330 / 248	250 / 187.5	360.3	359.5
	20°	290 / 218	220 / 165	385.8	380.9
	30°	180 / 135	135 / 101.25	396.2	390.3
	40°	65 / 47	50 / 37.5	342.0	342.1
20' (0.33°)	5°	250 / 188	120 / 90	236.5+	234.9
	20°	200 / 150	100 / 75	252.4	248.4
	30°	170 / 128	75 / 56.25	259.9	255.6
	40°	60 / 45	30 / 22.5	241.2	240.5
1.00°	5°	25 / 18.8	19 / 14.25	52.0	52.0
	20°	15 / 11.3	11 / 8.25	50.9	51.9
	30°	12 / 9	9 / 6.75	51.1	53.3
	40°	10 / 7.5	7 / 5.25	40.6	43.5
1°30' (1.50°)	5°	10 / 7.5	7 / 5.25	13.8	13.6
	20°	7 / 5.25	5 / 3.75	12.8	12.9
	30°	5 / 3.75	3 / 2.25	13.2	13.5
	40°	4 / 3	3 / 2.25	15.4	15.6

**+ Denotes Failure, Level 2 - meets Level 1 requirements**

Samples meet requirements for ANSI 107-2004 Level 1 reflectivity.  
Samples do **NOT** meet requirements for ANSI 107-2004 Level 2 reflectivity.

