

ASTM D4956 Type IV



TABLE 5 Type IV Sheeting^A

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown
0.1 ^{°B}	-4°	500	380	200	70	90	42	25
0.1 ^{°B}	+30°	240	175	94	32	42	20	12
0.2°	-4°	360	270	145	50	65	30	18
0.2°	+30°	170	135	68	25	30	14	8.5
0.5°	-4°	150	110	60	21	27	13	7.5
0.5°	+30°	72	54	28	10	13	6	3.5

High Intensity Prismatic (HIP) Retroreflective Sheeting



ASTM D4956 Type XI

TABLE 10 Type XI Sheeting^A

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown	Fluorescent Yellow-Green	Fluorescent Yellow	Fluorescent Orange
0.1 ^{0B}	-4°	830	620	290	83	125	37	25	660	500	250
0.1 ^{0B}	+30°	325	245	115	33	50	15	10	260	200	100
0.2°	-4°	580	435	200	58	87	26	17	460	350	175
0.2°	+30°	220	165	77	22	33	10	7.0	180	130	66
0.5°	-4°	420	315	150	42	63	19	13	340	250	125
0.5°	+30°	150	110	53	15	23	7.0	5.0	120	90	45
1.0°	-4°	120	90	42	12	18	5.0	4.0	96	72	36
1.0°	+30°	45	34	16	5.0	7.0	2.0	1.0	36	27	14

Wide Angle Prismatic Retroreflective Sheeting



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2.5 Materials

2.5.1 Sign Plates

Sign plates shall be made of 10 S.W.G sheets of aluminium alloy HS 30-WP conforming to B.S. 1470 with a minimum thickness of 3 mm or aluminium composite material. A sign plate not exceeding 1.2 m in height and 1.2 m in width shall be made from a single sheet.

Where more than one sheet is used to make up a sign plate, the sheets shall be rectangular, of approximately the same size and shape, and the position of the joints shall be to the approval of the S.O.

2.5.2 Reflective Sheetings

Retro-reflective sheeting is a material consisting of one or more retro-reflective elements embedded within a transparent film having a smooth, flat outer surface. Two types of retro-reflective sheeting that have been established and identified for use on traffic signs are High Intensity Prismatic and Wide Angle Prismatic sheeting. Both these sheeting are available in sheets and rolls using pressure sensitive adhesive. Application of pressure sensitive adhesive sheeting to sign substrates is by using hand squeezed roller applicator.

High Intensity Prismatic sheeting is a retro-reflective sheeting referred to as 'high-intensity' which is typically an unmetallised microprismatic retro-reflective element material complying with D4956-09 and Table 2.6.

Wide Angle Prismatic sheeting is a retro-reflective sheeting which is typically an unmetallised cube corner microprismatic retro-reflective element material complying with ASTM D4956-09 and Table 2.7.

The retro-reflective sheeting shall be applied on non-coated aluminium surface only. Back surface of aluminium plate shall be painted in executive grey.

The colour to be used on the various types of traffic signs are stated in the notes of Table 2.1.

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Table 2.6: High Intensity Prismatic Sheetting ^A (For all standard traffic signs)

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown
0.1° ^A	-4°	500	380	200	70	90	42	25
0.1° ^A	+30°	240	175	94	32	42	20	12
0.2°	-4°	360	270	145	50	65	30	18
0.2°	+30°	170	135	68	25	30	14	8.5
0.5°	-4°	150	110	60	21	27	13	7.5
0.5°	+30°	72	54	28	10	13	6	3.5

High Intensity Prismatic (HIP) Retroreflective Sheetting

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Table 2.7: Wide Angle Prismatic Sheeting^a (For all route number markers)

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown	Fluorescent Yellow Green	Fluorescent Yellow	Fluorescent Orange
0.1°	-4°	830	620	290	83	125	37	25	660	500	250
0.1°	+30°	325	245	115	33	50	15	10	260	200	100
0.2°	-4°	580	435	200	58	87	28	17	460	350	175
0.2°	+30°	220	165	77	22	33	10	7.0	160	130	68
0.5°	-4°	420	315	150	42	63	19	13	340	250	125
0.5°	+30°	150	110	53	15	23	7.0	5.0	120	90	45
1.0°	-4°	120	90	42	12	18	5.0	4.0	95	72	36
1.0°	+30°	45	34	18	5.0	7.0	2.0	1.0	38	27	14

Wide Angle Prismatic Retroreflective Sheeting