

KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series

Description

KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series is an enclosed lens type reflective sheeting, having smooth and flat surface. The sheeting meets or exceeds requirements of ASTM D4956 Type1 Specification, ISO 3864-1 Type1 Specification and EN12899-1 Class RA₁ Specification.

Color Availability, Product code No. and Standard size

Color	Product Code No.
White	#2013
Yellow	#2043
Orange	#2053
Red	#2063
Green	#2073
Blue	#2083
Brown	#2193

Standard Width : 36inches, 48inches
Standard Length : 45.7m (50yards)

Photometric performance

Minimum Coefficient of Retroreflective values of KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series when measured in accordance with CIE Publication 54:1982 are shown in Table 1.

Table 1 : Minimum Coefficient of Retroreflective values (R_A) (cd/lx/m²)

Observation Angle (degree)	Entrance Angle (degree)	White #2013	Yellow #2043	Orange #2053	Red #2063	Green #2073	Blue #2083	Brown #2193
12'	+5°	70	50	25	14.5	9	4	1
	+30°	30	22	10	6	3.5	1.7	0.3
	+40°	10	7	2.2	2	1.5	0.5	-
20'	+5°	50	35	20	10	7	2	0.6
	+30°	24	16	8	4	3	1	0.2
	+40°	9	6	2.2	1.8	1.2	-	-
2.0°	+5°	5	3	1.2	1	0.5	-	-
	+30°	2.5	1.5	0.5	0.5	0.3	-	-
	+40°	1.5	1	-	0.5	0.2	-	-

Day-time color - Specification Limits

The chromaticity co-ordinates and luminance factor of KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series when measured in accordance with CIE Publication no.15.2 using CIE standard illumination D65 and CIE 45/0 geometry conform to Table 2.

Table 2 : Day-time color Specification Limits

Color	Specification Limits								Luminance	
	1		2		3		4		Min	Max
	x	y	x	y	x	y	x	y		
#2013 White	0.355	0.355	0.305	0.305	0.285	0.325	0.335	0.375	0.27	—
#2043 Yellow	0.545	0.454	0.487	0.423	0.427	0.483	0.465	0.534	0.16	—
#2053 Orange	0.610	0.390	0.535	0.375	0.506	0.404	0.570	0.429	0.14	—
#2063 Red	0.735	0.265	0.674	0.236	0.569	0.341	0.655	0.345	0.03	—
#2073 Green	0.007	0.703	0.248	0.409	0.177	0.362	0.026	0.399	0.03	—
#2083 Blue	0.078	0.171	0.150	0.220	0.210	0.160	0.137	0.038	0.01	—
#2193 Brown	0.455	0.397	0.523	0.429	0.479	0.373	0.558	0.394	0.03	0.09

Application

KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series is a pressure-sensitive sheeting that should be applied at room temperature (18 to 28°C) by a squeeze roll applicator.

Substrates: Flat Aluminum alloys comply with EN 12899-1, 2006 Standard are only recommended.
 Always pretest your specific substrate prior to application.
 Plastic substrates are not recommended.

Adhesion properties:

Adhesion --- 10.0mm --- when measured in accordance with ASTM D4956-09 clause 7.5.

Resistance to Artificial Weathering

After the artificial weathering test by sunshine weather-o-meter for 1,000 hours except #2053 Orange, KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series retains more than 50% of the reflective intensity values specified in Table-1, and also show good colorfastness and no evidence of cracking, scaling, pitting, blistering, edge lifting or curling or more than 0.8mm shrinkage or expansion.

Other Properties

KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series conforms to all other requirements specified in ISO 3864-1 and ASTM D 4956-09 Type1.

Performance Life

According to the test results by both natural outdoor exposure and artificial weathering, KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series can be expected to provide the effective performance life of 7 years except #2053 Orange color (for 3 years) under normal and vertical outdoor conditions. However, The effective performance life will depend upon substrate selection, preparation and compliance with recommended application procedures, exposure conditions and maintenance.

Screen process Ink

KIWALITE KT-F series Screen Process INK which is fast dry one component ink can be used on KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series.

Storage and Shelf Life

KIWALITE Engineer-7 Grade Reflective Sheeting #2000 Series should be stored in a cool, dry area, preferably at 18 - 28°C and 30 - 60% relative humidity, and should be used within one year from date of delivery.

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Terms and Conditions of Sales

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