

Product Evaluation

RE: Review of NIKKALITE High Intensity Micro-prismatic 94000 Series Reflective Sheeting

PRODUCT

The NIKKALITE High Intensity Micro-prismatic 94000 Series Reflective Sheeting is manufactured and distributed by Nippon Carbide Industries (USA) Inc. with offices located in Rancho Dominguez, California, USA.

VENDOR CLAIMS AND INFORMATION

CLAIMS

The NIKKALITE High Intensity Micro-prismatic 94000 Series Reflective Sheeting Crystal Grade. Crystal Grade is a retro-reflective sheeting that uses the principle of the retroreflection of micro-prisms. With prism type reflection element the light reflects efficiently without diminishing, as the three reflection planes that constitute the element and are positioned at right angles in relation to each other, completely reflect within the element. Product web link: <http://www.nikkalite.com/index.html>

DESCRIPTION

NIKKALITE High Intensity Micro-prismatic 94000 Series Reflective Sheeting conforming to all requirements of ASTM D4956, Type III and Type IV Sheeting (High Intensity) retro-reflective sheeting.

POTENTIAL USAGE

NIKKALITE High Intensity Micro-prismatic 94000 Series sheeting is ideal for permanent traffic signs, temporary traffic control devices and other types of safety devices requiring high visibility, legibility and durability. When used on permanent traffic signs. NIKKALITE High Intensity Micro-prismatic 94000 Series sheeting is warranted to 10 years with 100% full replacement within the first 7 years and 100% sheeting replacement within the final 3 years.

STANDARDS

ASTM D4956 Standard Specification for Retroreflective Sheeting for Traffic Control

AASHTO National Transportation Product Evaluation Program, Report SSM-2010-01-016

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE

Alberta Transportation has no experience with this product. Alberta Transportation uses reflective sheeting material conforming to Standard Specifications for Highway Construction, Specification 5.18 Supply of Permanent Highway Signs, Posts and Bases.

APPLICABLE STANDARDS

The Alberta Transportation specification for Reflective Sign Sheeting Material is as follows:

Standard Specification for Highway Construction, Specification 5.18 Supply of Permanent Highway Signs, Posts and Bases

PRODUCT COMPARISON TO STANDARD
 Typical Coefficient of Retroreflection (R_A) cd/fc/ft² (cd.1x⁻¹.m⁻²) of ULG II sheeting:

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown
94000 Series 0.2°	-4°	360	270	-	50	65	30	-
ASTM Type IV 0.2°	-4°	360	270	-	50	65	30	-
94000 Series 0.2°	+30°	170	135	-	25	30	14	-
ASTM Type IV 0.2°	+30°	170	135	-	25	30	14	-
94000 Series 0.5°	-4°	150	110	-	21	27	13	-
ASTM Type IV 0.5°	-4°	150	110	-	21	27	13	-
94000 Series 0.5°	+30°	72	54	-	10	13	6	-
ASTM Type IV 0.5°	+30°	72	54	-	10	13	6	-

The 94000 Series Retroreflective sheeting meets the performance requirements of the ASTM D4956, Type IV Sheeting (High Intensity) Standard Specification for Retroreflective Sheeting for Traffic Control.

RECOMMENDATIONS:

NIKKALITE High Intensity Micro-prismatic 94000 Series Reflective Sheeting should be listed as a Potential Product under Alberta Transportation Products List, Signs and Support System – Reflective Sheeting, Regulatory/Warning/Information Signs – Proprietary, based on the information provided.

Final acceptance as a proven product will be based on field performance.

TRIAL PROJECTS

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