

**LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
SPECIFICATIONS**

**RETROREFLECTIVE SHEETING
TYPE IV, VIII, & XI**

Approved for
Maintenance Division

DESCRIPTION:

By: 

This specification covers the minimum requirements for Type IV, VIII and Type XI retroreflective sheeting that is an unmetalized microprismatic retroreflective element material that will primarily be used to in the fabrication of traffic control signs.

REQUIREMENTS:

The sheeting shall conform to ASTM D 4956 except as modified herein and shall be an approved product listed on the respective Approved Materials List (AML) for Reflective Sheeting as indicated below:

- AML for Reflective Sheeting, Type IV, VIII, or XI, Permanent
 - All Colors Except Fluorescent Orange
- AML for Reflective Sheeting, Type IV, Temporary Signs, Barricades and Channelizing Devices
 - Type IV Fluorescent Orange

ACCELERATED WEATHERING:

Type IV, VIII and Type XI retroreflective sheeting, when processed, applied and cleaned in accordance with the manufacturer's recommendations shall perform in accordance with Table 1015-4.

**Table 1015-4
Accelerated Weathering Standards¹**

Type	Retroreflectivity ²				Colorfastness ³	
	Orange/ Fluorescent Orange		All colors, except Orange/ Fluorescent Orange		Orange/ Fluorescent Orange	All colors, except Orange/ Fluorescent Orange
<i>IV, VIII and Type XI</i>	1 year	80 ⁴	3 years	80 ⁴	1 year	3 years

¹At an angle of 45° from the horizontal and facing south in accordance with ASTM G7 at an approved test facility in Louisiana or South Florida.

²Percent retained retroreflectivity of referenced table after the outdoor test exposure time specified.

³Colors shall conform to the color specification limits of ASTM D 4956 after the outdoor test exposure time specified.

⁴ASTM D4956, Tables 5, 8, and 10

ADHESIVE CLASS:

The adhesive shall be Class 1 (pressure sensitive) as specified in ASTM D 4956.

PERFORMANCE:

The sheeting when processed, applied and cleaned in accordance with the manufacturer's recommendations shall perform outdoors in accordance with the performance standards in Table 1015-5.

**Table 1015-5
Reflective Sheeting Performance Standards**

Type	Retroreflectivity ¹ -- Durability ²				Colorfastness ³
	Orange/ Fluorescent Orange		All colors, except orange/Fluorescent Orange		
<i>IV, VIII and Type XI</i>	3 years	80 ⁴	10 years	80 ⁴	3 years

¹Percent retained retroreflectivity of referenced table after installation and the field exposure time specified.

²All sheeting shall maintain its structural integrity, adhesion and functionality after installation and the field exposure time specified.

³All colors shall conform to the color specification limits of ASTM D 4956 after installation and the field exposure time specified.

⁴ ASTM D4956, Tables 5, 8, and 10

GUARANTY:

The material shall have a guaranty from the supplier that states if the retroreflective sheeting fails to comply with the requirements of this specification within the time frames noted below, the supplier shall replace the defective material with the amount of sheeting required to restore the faulty sign face to its original effectiveness. Guaranty shall be provided at no cost to the Department. Guaranty shall begin on the date of delivery and apply if failure occurs within:

- Three (3) years for all orange and fluorescent orange sheeting
- Ten (10) years for all sheeting colors except orange and fluorescent orange

Replacement sheeting shall carry the unexpired guaranty of the sheeting for which it replaces.

CERTIFICATION:

A Certificate of Compliance stating the material supplied conforms to the requirements of this specification must be provided with each shipment. Certificate will be kept on file by the Department.

PACKAGING AND MARKING:

The sheeting shall be supplied on rolls. Each roll shall be individually packaged in containers. Containers must prevent the material from adhering to it during shipment and storage.

Each container shall be labeled with the following information:

- Sheeting Color & Size
- Manufacturer's Name
- Batch Number
 - Each batch shall have its own identification number.
- Date of Manufacture