

U.S. Department of Transportation

## Federal Highway Administration

1200 New Jersey Avenue, SE

Washington, DC 20590

202-366-4000

### Safety

## 2014 Traffic Sign Retroreflective Sheeting Identification Guide

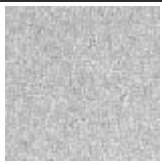
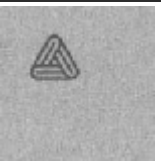

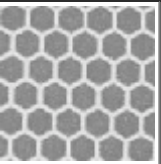
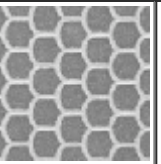
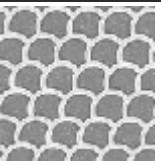
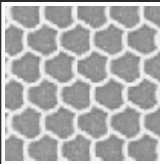
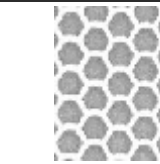
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This document is intended to help identify sign sheeting materials for rigid signs and their common specification designations. It is not a qualified product list. FHWA does not endorse or approve sign sheeting materials. Many other sheeting materials not listed here are available for delineation and construction/work zone uses.

Many sign sheeting materials have watermarks and/or patterns that are used to identify the material type and manufacturer. The watermarks shown in this guide have been enhanced. The watermarks will be less visible in practice and may not be present on smaller pieces of sheeting due to the spacing.

### Retroreflective Sheeting Materials Made with Glass Beads

Example of Sheeting (Shown to scale)								
<b>ASTM D4956-04</b>	I	II	II	III	III	III	III	III
<b>ASTM D4956-13</b>	I	II	II	III	III	III	III	III
<b>AASHTO M268-13</b>	(1)	(1)	(1)	A	A	A	A	A
<b>Manufacturer</b>	Several companies	Avery Dennison®	Nippon Carbide	3M™	ATSM, Inc.	Avery Dennison®	Nippon Carbide	ORAFOL Americas Inc
<b>Brand Name</b>	Engineer Grade	Super Engr Grade	Super Engr Grade	High Intensity	High Intensity	High Intensity	High Intensity	ORALITE® High Intensity
<b>Series</b>	Several	T-2000	15000	2800 3800	ATSM HI	T-5500	N500	5800

**NOTES:**

(2) (8)

(3) (4) (9)

(4)

(3) (4) (9)

(4)

(4)

(4)

(4)

- 1) Sheeting material does not meet minimum AASHTO classification criteria.
- 2) Glass Bead Engineer Grade sheeting is uniform without any patterns or identifying marks.
- 3) Material no longer sold in the United States as of the date of this publication.
- 4) Section 2A.08 of the 2009 MUTCD (<http://mutcd.fhwa.dot.gov>) does not allow this sheeting type to be used for new legends on green signs.

- ASTM D4956-04 is referenced in Table 2A-3 of the 2009 MUTCD.
- ASTM D4956-13 is the most current ASTM sign sheeting specification (the 2013 version is designated by "-13").
- AASHTO M268-13 is the most current AASHTO specification (the 2013 version is designated by "-13").


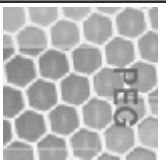
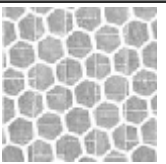

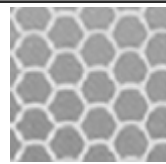
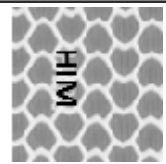
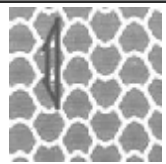
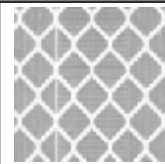
**Manufacturer Contact Information**3M – <http://www.3M.com/roadwaysafety>ATSM, Inc. – <http://www.atsminc.com>Avery Dennison – <http://www.reflectives.averydennison.com>Nippon Carbide – <http://www.nikkalite.com>ORAFOL Americas Inc. – <http://www.orafolamericas.com>

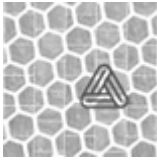
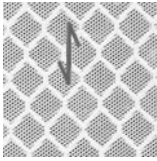
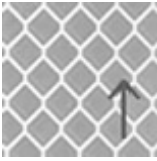
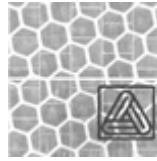
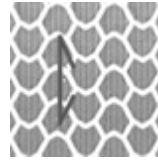
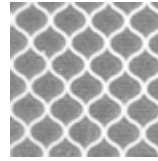
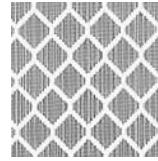
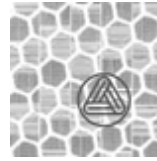
FHWA Publication Number: FHWA-SA-14-022. You may download and print the electronic version of this document, available at [www.fhwa.dot.gov/retro](http://www.fhwa.dot.gov/retro)

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**Retroreflective Sheeting Materials Made with Micro-Prism**

Example of Sheeting (Shown to scale)								
D4956-04	(5)	(5)	III, IV	III, IV, X	(5)	(5)	(5) / X	(5)
D4956-13	I	I	III, IV	III, IV	III, IV	III, IV	VIII	VIII
M268-13	(6)	(6)	B	B	B	B	B	B
Manufacturer	3M™	Avery	Avery	3M™	ORAFOL	Nippon	Nippon	3M™

		Dennison®	Dennison®		Americas Inc	Carbide	Carbide	
Brand Name	EGP	PEG	HIP	HIP	ORALITE® HIP	HIM	Crystal Grade	Reflective Sheeting
Series	3430	T-2500	T-6500	3930	5900/5930	CRG 94000	CRG 92000	3940
NOTES:	(8)	(8)						
Example of Sheeting (Shown to scale)								
D4956-04	VIII	VII, VIII, X	IX	IX	(5)	(5)	(5)	(5)
D4956-13	VIII	VIII	IX	IX	IX	IX	XI	XI
M268-13	B	(7)	B	B	B	B	D	D
Manufacturer	Avery Dennison®	3M™	3M™	Avery Dennison®	Nippon Carbide	ORAFOL Americas Inc	3M™	Avery Dennison®
Brand Name	MVP Prismatic	Diamond Grade™ LDP	Diamond Grade™ VIP	OmniView™	Crystal Grade	ORALITE®	Diamond Grade™ DG3	OmniCube™
Series	T-7500	3970	3990	T-9500	95000	7900	4000	T-11500
NOTES:		(9)			(9)			

- 5) Material was either unavailable in 2005 (previous version of this Guide) or unassigned in the 2004 version of ASTM D4956.  
6) Sheeting material does not meet minimum AASHTO classification criteria.  
7) Material has been discontinued prior to AASHTO M268-10.  
8) Section 2A.08 of the 2009 MUTCD (<http://mutcd.fhwa.dot.gov>) does not allow this sheeting type to be used for new yellow or orange signs, or new legends on green signs.  
9) Material no longer sold in the United States as of the date of this publication.

## Resources

Federal Highway Administration – <https://www.fhwa.dot.gov/retro>  
Manual on Uniform Traffic Control Devices (MUTCD) – <http://mutcd.fhwa.dot.gov>  
Texas A&M Transportation Institute – <http://tti.tamu.edu/visibility>  
ASTM – <http://www.astm.org>  
AASHTO – <http://www.transportation.org>

Page last modified on May 27, 2014

