

## Product Catalogue Reflective Solutions



POI 17



Avery Dennison is committed to designing and manufacturing life saving innovative products and solutions that make the world's roadways safer. Our reflective sheeting products are preferred for signage, work zone devices, and vehicles. Avery Dennison is also leading the digital transformation of the industry with the TrafficJet<sup>™</sup> Print System, which helps sign-shops around the world increase their sign-making productivity while also improving the quality of life for the workforce throughout the process.



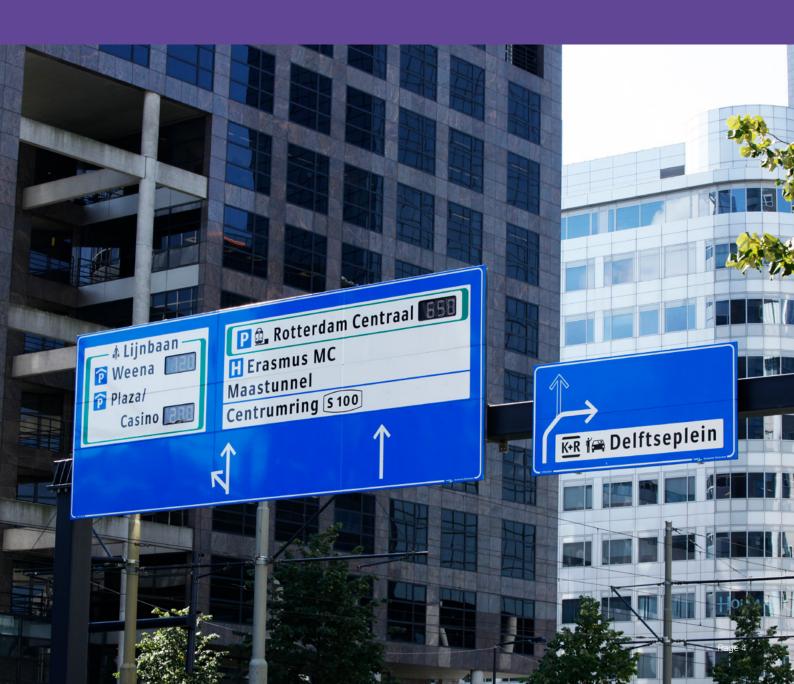
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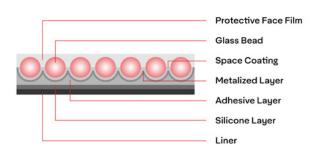
## Science of Retroreflective Sheeting



### The two fundamental technologies for achieving retro reflection:

#### **Glass Beads**

Engineering Grade (EG) uses glass beads for product construction.



#### Prisms

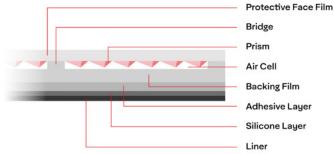
#### **Truncated Cube Corner Microprismatic**

Truncated cube corner microprismatic uses traditional triangular or truncated prisms.

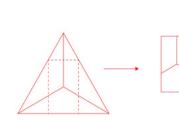
#### **Full Cube Corner Microprismatic**

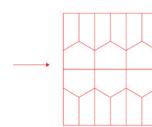
**Triangular Cube Prisms** 

In a cube corner prism, the angle between each pair of sides can be precisely controlled based on the desired performance and the material used. When light hits a side, it is reflected to another, and another, until it has been turned 180° and returned to its source. Unlike beads that leave a gap when packed together, prisms can be nested into an array, increasing overall efficiency.



Air Cell **Backing Film** Adhesive Layer Silicone Layer





Full Cube Prisms



Example bridge pattern



# Traffic & Highway



Our robust portfolio of prismatic and glass bead pressure-sensitive reflective films and overlay films are the ideal choice for optimizing high reflectivity, legibility and visibility. Our wide selection ensures high value and safety advantages and that you have the right product for any job.

| Reflective<br>Media           | Watermark                                     | Technology     | Class of<br>Performance*                         | CE<br>Certified | Digitally<br>Printable | Durability        | Colors |
|-------------------------------|---|----------------|--|-----------------|------------------------|-------------------|--------|
| T-11500<br>OmniCube<br>Series | <b>CE</b> T-11500<br>0X0000 12 Years          | Microprismatic | ASTM D4956 Type<br>XI / Class 3 Full<br>Cube     | Yes             | Yes (W, Y,<br>FY, FYG) | Up to 15<br>years |        |
| T-7500-B<br>Series            | T-7500B RAS<br>10 YE ARTS<br>AA1709           | Microprismatic | CUAP Class R3B                                   | Yes             | Yes (W, Y,<br>FYG)     | Up to 12<br>years |        |
| T-7500 MVP<br>Series          | T.7500MVP RAS<br>10 YEARS<br>4A1709           | Microprismatic | ASTM D4956 Type<br>VIII / CUAP Type<br>Class R3A | Yes             | Yes (W, Y,<br>FY, FYG) | Up to 12<br>years |        |
| T-6500 Series                 | <b>C € (20)</b> T-6500 RA2<br>10 Years 0X0000 | Microprismatic | ASTM D4956 Type<br>IV / EN12899/1<br>RA2/R2      | Yes             | Yes<br>(W & Y)         | Up to 12<br>years |        |
| T-6500-A<br>Series            | C C C C TESO0'A PA2<br>10 Years 0X0000        | Microprismatic | ASTM D4956 Type<br>IV / EN12899/1<br>RA2/R2      | Yes             | No                     | Up to 12<br>years |        |
| T-2500 D<br>Series            | CEE PEG-D RA1<br>7 Years 0X0000               | Microprismatic | ASTM D4956 Type I<br>/ EN 12899/1 RA1            | Yes             | Yes                    | Up to 7<br>years  | 0      |
| T-2500<br>Series              | <b>CE</b> PEG RA1<br>7 Years 0X0000           | Microprismatic | ASTM D4956 Type I<br>/ EN 12899/1 RA1            | Yes             | No                     | Up to 7<br>years  |        |
| T-1500 D-17<br>Series         | CE<br>RA1 🛦 7 Years                           | Glass bead     | ASTM D4956 Type I<br>/ EN 12899/1 RA1            | Yes             | Yes                    | Up to 7<br>years  |        |
| T-1500 B<br>Series            | CE<br>RA1 🚵 7 Years                           | Glass bead     | ASTM D4956 Type I<br>/ EN 12899/1 RA1            | Yes             | Yes                    | Up to 7<br>years  |        |
| T-1500 A<br>Series            | CE<br>RA1 🙈 7 Years                           | Glass bead     | ASTM D4956 Type I<br>/ EN 12899/1 RA1            | Yes             | No                     | Up to 7<br>years  |        |
| M-0500 D<br>Series            | NA  | Glass bead     | Non-specification                                | NA              | Yes                    | Up to 3<br>years  |        |
| M-0500 A<br>Series            | NA  | Glass bead     | Non-specification                                | NA              | No                     | Up to 3<br>years  |        |

\*For detailed country specific compliance and certification, please refer to the <u>product data sheets</u>



# TrafficJet<sup>TM</sup> Print System



The TrafficJet<sup>™</sup> Print System is the No. 1 selling, most accepted digital traffic sign printer for specification-compliant and warranted traffic signs around the globe.

Simple. Fast. Durable. Cost-effective. Sustainable.





#### **TrafficJet Xpert**

TrafficJet Xpert is built on the Mutoh XpertJet printer platform optimized for specification compliant traffic signage, work zone applications, and custom graphics.

True Traffic Colour spot inks and included software automates sign making, simplifying the printing of specification compliant traffic control, way finding, and custom signage.

#### **TrafficJet Pro**

Inspired by industry demand for sustainable traffic sign production and improved sign durability, TrafficJet Pro eliminates the traditionally wasteful and hazardous screen-printing process.

Avery Dennison's TrafficJet Pro is now the most productive traffic sign printing system and continues to lead the digital printing revolution.



#### For Your Entire Printing Process

- Installation
- Printer
- · FlexiPRINT Avery Dennison Edition software
- · Inks
- · Retroreflective sheeting
- Overlay
- Laminator
- Service support

Avery Dennison provides the installation, printer, ink, sheeting, overlay, laminator, and service support - so there is no question of who to call or who guarantees your sign performance. It is our system, our warranty, and your peace of mind. Avery Dennison is the trusted leader in digital printing for the traffic industry.

For more information about the TrafficJet<sup>™</sup>: Brochure TrafficJet Digital Printing Solution



## Inks



Specially formulated by Avery Dennison, True Traffic Color spot inks come with the industry's longest warranty when printed on Avery Dennison sheeting with protective overlay.

TrafficJet<sup>™</sup> Eco-Solvent spot colors & Cyan and Magenta TrafficJet<sup>™</sup> Pro UV spot colors and Magenta.

| Inks                             | Class of<br>Performance | Digital Printing<br>Technology | Colors | Packaging   |
|----------------------------------|-------------------------|--------------------------------|--------|-------------|
| TrafficJet <sup>™</sup> Inks     | Up to Class 3           | Eco-Solvent                    |        | 440ml/950ml |
| TrafficJet <sup>™</sup> Pro Inks | Up to Class 3           | UV                             |        | 1 liter     |
| 4930*                            | Up to Class 3           | Solvent                        |        | 1 gallon    |
| UVTS*                            | Up to Class 3           | UV                             |        | 1 gallon    |

#### \*Inks for screen printing





More

Work Zone Temporary Traffic Control Sheeting



Roadway construction work zones create safety challenges for motorists and workers. The complications of changing work conditions that affect traffic flow demand effective traffic control to safely alert motorists day and night, and under all weather conditions.

Our fluorescent work zone, reboundable, and prestriped barricade products provide optimum visibility under demanding conditions.

| Reflective<br>Media             | Technology                        | Class of Performance                          | Substrate            | Digitally<br>Printable | Durability      | Colors |
|---------------------------------|-----------------------------------|---|----------------------|------------------------|-----------------|--------|
| W-3000<br>Pre-Printed<br>Series | High-Intensity<br>Prismatic       | Class EN-12899 / RA2-C DIN<br>67520 & 6171    | Plastic              | Preprinted             | Up to 3 years   |        |
| W-6000<br>Series                | High Intensity<br>Prismatic Grade | ASTM D4956 Type III/IV/ EN<br>12899/1 RA2/R2  | Aluminum/<br>Plastic | Yes*<br>(D version)    | Up to 3 years   |        |
| W-7000<br>Series                | High Intensity<br>Prismatic Grade | ASTM D4956 Type VIII/ CUAP<br>Type Class 3    | Aluminum             | Yes                    | Up to 3 years** | •      |
| W-11000<br>OmniCube™<br>Series  | High Intensity<br>Prismatic Grade | ASTM D4956 Type IX, XI /<br>Class 3 Full Cube | Aluminum/<br>Plastic | Yes<br>(solid colors)  | Up to 5 years** |        |
| WR-6100<br>Series               | High Intensity<br>Prismatic Grade | ASTM D4956 Type III                           | Plastic              | No                     | Up to 3 years   |        |
| WR-7100<br>Series               | High Intensity<br>Prismatic Grade | ASTM D4956 Type IV / EN<br>12899/1 RA2/R2     | Plastic              | No                     | Up to 3 years   |        |
| WU-7000<br>Roll-up film         | High Intensity<br>Prismatic Grade | ASTM D4956 Type VI                            | NA                   | No                     | Up to 3 years   |        |

\*Digitally Printable

\*\*Up to 5 years depending on converting method for FO, vertical exposure only, 3 year for all other options



# Protective Overlay Films



Protective Overlay Films for your specific traffic sign needs, designed to address common signage problems from around the world. Easy to cut and apply.

| Overlays              | Class of<br>Performance | Durability*     | Digital Printing<br>Technology | Colors    |
|-----------------------|-------------------------|-----------------|--------------------------------|-----------|
| OL-1000 Anti Graffiti | Up to RA3               | Up to 15 Years  | EcoSolvent                     | - Clear   |
| OL-1000 UV Series     | Up to RA3               | Up to 15 Years  | EcoSolvent, UV-LED             | - Clear   |
| OL-2000 Series        | Up to RA3               | Up to 12 Years* | EcoSolvent                     |           |
| OL-2000 UV Series     | Up to RA3               | Up to 12 Years  | UV-LED                         | 🔵 - Clear |
| OL-1200 Anti Dew      | Up to RA3               | Up to 12 Years* | EcoSolvent, UV-LED             | - Clear   |

\*Warranty depends on the base sheeting



Avery Dennison OL-1000 is a premium clear overlay film ideal for protecting traffic signs. Not only can vandalized traffic signs be cleaned, but when printed with a TrafficJet Print System, it will also carry the industry's longest warranties.

This protective overlay offers Anti-Graffiti and UV protection in a single film.



Avery Dennison OL-1200 is a premium clear overlay film designed with a special coating to prevent the formation of water droplets on the surface of finished signs.

It was developed to add additional protection for signs used in climates with high humidity along with temperatures just above freezing.



## Translucent Reflective Sheeting



Our translucent prismatic retro reflective films are designed for backlit applications. These materials provide reflective backup protection in the event of an internal lamp or power failure. They are commonly used for airport runway signage but can also be used for street name and emergency exit sign applications.

| Backlit<br>Signage    | Technology     | Class of<br>Performance                                    | Substrate | Digitally<br>Printable | Durability    | Adhesion          | Colors |
|-----------------------|----------------|--|-----------|------------------------|---------------|-------------------|--------|
| T-6530<br>Translucent | Microprismatic | High intensity<br>Grade ASTM<br>D4956 Type IV /<br>Class 2 | Plastic   | Yes                    | Up to 3 years | Rear              |        |
| 6600<br>Translucent   | Microprismatic | High intensity<br>Grade ASTM<br>D4956 Type IV /<br>Class 2 | Plastic   | No                     | Up to 3 years | Rear<br>and Front |        |
| 11030<br>Translucent  | Microprismatic | High intensity<br>Grade ASTM<br>D4956 Type XI /<br>Class 3 | Plastic   | Yes                    | Up to 3 years | Rear<br>and Front |        |





## Vehicle Safety Films



Vehicle safety films provide striking daytime and nighttime appearance in even the worst weather conditions. These films are ideal for maintenance, utility, and emergency vehicles, because they give drivers advanced warning and time to react.

| Reflective<br>Media        | Technology     | Class of Performance                                       | Durability  | Digitally<br>Printable | Colors |
|----------------------------|----------------|--|---|------------------------|--------|
| V-4000 Series              | Glass bead     | ASTM D4956 Type I  | Up to 7 years   | Yes                    |        |
| V-4000E Series             | Glass bead     | ECE-104 D/E  | Up to 7 years   | Yes                    |        |
| VisiFlex™ V-8000<br>Series | Microprismatic | HOSDB/ASTM D8514/DIN<br>30710/Class 2/NFPA 1901            | 7 years white &<br>colors;<br>5 years<br>fluorescent* | Yes                    |        |
| Chevron                    | Microprismatic | ASTM D4956 Type IV,<br>Class 3, RA2, TPESC-B /<br>DIN30710 | W/R- 7 years;<br>FYG/R- 5 years                       | No                     |        |

\*Middle East, 5 years for white and colors, 3 years for fluorecent





## Vehicle Conspicuity Markings



Prismatic conspicuity markings improve nighttime vehicle recognition for trucks, trailers, service vehicles, railcars, slow-moving vehicles, buses, and emergency vehicles.

| Reflective Media | Watermark                   | Technology     | Class of<br>Performance | Durability     | Custom<br>logo option |
|------------------|-----------------------------|----------------|-------------------------|----------------|-----------------------|
| V-6700B Series   | En<br>104R-00 0001          | Microprismatic | ECE-104 C               | Up to 10 years | Yes                   |
| V-6790 Series    | €13 <b>▲</b><br>104R-000004 | Microprismatic | ECE-104 C               | Up to 3 years  | Yes                   |

#### Enhance your conspicuity tape with your company logo





# Car License Plate

Avery Dennison's complete glass bead reflective product line meets all worldwide specifications and offers the flexibility to print, emboss and even digitally image. Add the option of our unique Secure Mark<sup>™</sup> technology, and you will achieve an even higher level of license plate security.

| Vehicle<br>Registration | Technology | Class of Performance             | Substrate | Durability | Colors                  |
|-------------------------|------------|----------------------------------|-----------|------------|-------------------------|
| L-3050                  | Glass bead | ISO 7591 / DIN 74069,<br>BSAU145 | Aluminum  | 5 years    | Custom colors, Preprint |
| L-4050                  | Glass bead | ISO 7591 / DIN 74069,<br>BSAU145 | Aluminum  | 5 years    | Custom colors, Preprint |
|                         | ۲          | N∞619                            | 9PH       | 1          |                         |
|                         |            |                                  |           |            |                         |

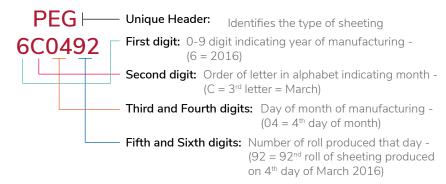


## Sheeting Identification Guide

#### Using the watermark in your maintenance program

Watermarks allow for material identification and traceability from manufacturing through the life of the retroreflective sheeting. Manufacturing personnel can also use them to identify unboxed rolls or manage inventory turns. Ultimately, watermarks enhance maintenance programs by increasing transparency, accountability, and quality.

#### Understanding the nomenclature of the lot number



| Specification: | Class I   | Class I   | Class I                                    | Class I   | Class I                                      | Class II  |
|----------------|---|---|--|---|--|---|
| Watermark:     | CE<br>RA1 🙆 7 Years   | CE<br>RA1 🔊 7 Years   | CE<br>RA1 🙆 7 Years                        | <b>C € </b> PEG RA1<br>7 Years 0X0000               | CCC PEG-D RA1<br>7 Years 0X0000              | <b>CE</b> A T-6500 RA2<br>10 Years 0X0000                   |
| Product name:  | T-1500-A<br>Engineering Grade<br>Beaded                       | T-1500-B<br>Engineering Grade<br>Beaded                       | T-1500-D-17<br>Engineering Grade<br>Beaded | T-2500 EG<br>Prismatic<br>Engineering Grade         | T-2500D-17<br>Prismatic<br>Engineering Grade | T-6500 HIP<br>High Intensity<br>Prismatic<br>Microprismatic |
| Specification: | Class II  | Class III   | Class III                                  | Class III   | ECE104                                       | ECE104  |
| Watermark:     | C C C C C 10 Years 0X0000                                     | T-7500MVP.RA3<br>10 YEARS<br>4A1709                           | T-7500B RA3<br>10 YEARS<br>4A1709          | <b>C €</b> ( T-11500<br>0X0000 12 Years             | €<br>104R-000004                             | ¢<br>E13<br>104R-00 0001                                    |
| Product name:  | T-6500-A HIP<br>High Intensity<br>Prismatic<br>Microprismatic | T-7500 MVP<br>Maximum Visual<br>Performance<br>Microprismatic | T-7500-B<br>Microprismatic                 | T-11500<br>OmniCube™<br>Full Cube<br>Microprismatic | V-6790<br>Conspicuity Tape<br>Microprismatic | V-6700B<br>Conspicuity Tape<br>Microprismatic               |

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