



Neutral Interior Films

Low reflectance, high performance



Avery Dennison's Neutral interior window films add a subtle gray appearance to glazing for an extremely effective reduction in heat gain and glare that preserves the natural view through the glass.

Incorporate subtle sophistication and comfort to residential and commercial projects with Avery Dennison's Neutral Interior Films.

NT PerLite Ceramic i ^{WA}

NT PerLite Ceramic i is a highly durable, ceramic-based interior window film. **NT PerLite Ceramic i** was developed using a proprietary patented advanced ceramic coating technology. As a result, its attractive neutral grey color delivers excellent solar energy rejection, with surprisingly low visible light reflectance. This makes **NT PerLite Ceramic i** an ideal solution for economic energy-saving projects when it's important to preserve view and retain a natural appearance - both inside and out. Available in different VLT's, **NT PerLite Ceramic i** is particularly popular in residential and commercial projects.



NT Natura i ^{WA}

NT Natura i low reflectance neutral grey solar control films give highly effective heat rejection, glare reduction and privacy.

NT Natura i was developed for residential & commercial projects targeting effective energy control but requiring a subtle appearance on glass. **NT Natura i** is ideal for installation on single pane windows: consult Avery Dennison's film-to-glass application chart for additional options. **NT Natura i** is available in different VLT's.



NT PerLite Ceramic for Safety ^{PS}

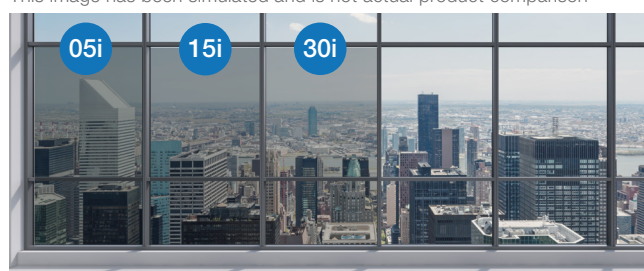
In addition to all of the benefits of Avery Dennison's **NT PerLite Ceramic i**, neutral interior window films, **NT PerLite Ceramic 35** for safety is available in thickness of 6 or 10 mil providing excellent protection from a variety of natural and man-made hazards.

This image has been simulated and is not actual product comparison



NT PerLite Ceramic 20i | NT PerLite Ceramic 35i | NT PerLite Ceramic 35 Safety | NT PerLite Ceramic 50i | NT PerLite Ceramic 70i

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NT Natura 05i | NT Natura 15i | NT Natura 30i

Features and Benefits

- > High heat rejection for enhanced comfort and reduced cooling costs
- > High glare reduction - improves screen viewing, reduces eye-strain
- > Neutral color - provides natural gray appearance, inside and out
- > 99+% UV block limits fading and damage from the sun



Graphics Solutions



UV Block



Lower heat gain



Light control



Aesthetics

| Optical and Solar Properties** | NT PerLite Ceramic 20i | | NT PerLite Ceramic 35i | | NT PerLite Ceramic 35 6 mil | | NT PerLite Ceramic 35 10 mil | | NT PerLite Ceramic 50i | | NT PerLite Ceramic 70i | |
|-------------------------------------|------------------------|--------|------------------------|--------|-----------------------------|--------|------------------------------|--------|------------------------|--------|------------------------|--------|
| | R070L6W | | R070L5W | | R170L5T PS | | R270L5T PS | | R069L3W / R058L3S PS | | R069L4W | |
| Item Number | Single | Double | Single | Double | Single | Double | Single | Double | Single | Double | Single | Double |
| Pane | Single | Double | Single | Double | Single | Double | Single | Double | Single | Double | Single | Double |
| Visible Light Transmitted | 22% | 20% | 40% | 37% | 40% | 36% | 40% | 37% | 51% | 47% | 68% | 61% |
| Visible Light Reflected (Interior) | 24% | 25% | 15% | 16% | 16% | 18% | 17% | 18% | 16% | 19% | 9% | 12% |
| Visible Light Reflected (Exterior) | 25% | 31% | 17% | 23% | 18% | 24% | 17% | 23% | 18% | 24% | 10% | 17% |
| Ultra Violet Block | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% | 99% |
| Total Solar Energy Reflected | 29% | 29% | 17% | 20% | 19% | 22% | 18% | 21% | 20% | 23% | 10% | 15% |
| Total Solar Energy Transmitted | 14% | 13% | 29% | 25% | 29% | 25% | 30% | 26% | 40% | 35% | 59% | 50% |
| Total Solar Energy Absorbed | 57% | 58% | 54% | 55% | 52% | 53% | 52% | 53% | 40% | 42% | 31% | 35% |
| Emissivity (Room Side) | 0.76 | 0.76 | 0.82 | 0.82 | 0.90 | 0.90 | 0.91 | 0.91 | 0.84 | 0.84 | 0.91 | 0.91 |
| Glare Reduction | 76% | 75% | 56% | 55% | 56% | 55% | 55% | 55% | 43% | 42% | 25% | 25% |
| Selective InfraRed Reduction (SIRR) | 91% | 91% | 78% | 78% | 86% | 86% | 33% | 33% | 67% | 67% | 44% | 44% |
| InfraRed Energy Rejection (IRER) | 74% | 74% | 60% | 60% | 69% | 69% | 26% | 26% | 53% | 53% | 33% | 33% |
| Shading Coefficient | 0.36 | 0.51 | 0.52 | 0.64 | 0.52 | 0.63 | 0.53 | 0.54 | 0.60 | 0.66 | 0.79 | 0.79 |
| Solar Heat Gain Coeff. (G-Value) | 0.30 | 0.44 | 0.45 | 0.55 | 0.44 | 0.54 | 0.46 | 0.55 | 0.51 | 0.57 | 0.69 | 0.68 |
| U-Value Winter (IP) | 1.00 | 0.47 | 1.03 | 0.48 | 1.07 | 0.49 | 1.08 | 0.49 | 1.04 | 0.48 | 1.08 | 0.49 |
| U-Value Winter (SI) | 5.68 | 2.67 | 5.85 | 2.72 | 6.08 | 2.78 | 6.13 | 2.78 | 5.91 | 2.73 | 6.13 | 2.78 |
| Luminous Efficacy | 0.62 | 0.40 | 0.75 | 0.57 | 0.77 | 0.58 | 0.76 | 0.58 | 0.85 | 0.72 | 0.86 | 0.78 |
| Total Solar Energy Rejected (%) | 70% | 56% | 55% | 45% | 56% | 46% | 54% | 45% | 49% | 43% | 31% | 32% |

| Solar Safety Window Film, NT PerLite Ceramic 35 6 mil | |
|---|--------------|
| Mechanical Properties | |
| Thickness | 6 mil |
| Tensile Strength at Break | 28,500 PSI |
| Break Strength | 145 lb/ inch |
| Elongation at Break | 125% |
| Peel Strength | 7 lb/ inch |
| Safety Testing | |
| Impact | AS/NZS 2208 |

| Solar Safety Window Film, NT PerLite Ceramic 35 10 mil | |
|--|--------------|
| Mechanical Properties | |
| Thickness | 10 mil |
| Tensile Strength at Break | 28,500 PSI |
| Break Strength | 270 lb/ inch |
| Elongation at Break | 125% |
| Peel Strength | 7 lb/ inch |

| Optical and Solar Properties** | NT Natura 05i | | NT Natura 15i | | NT Natura 30i | |
|-------------------------------------|---------------|--------|---------------|--------|---------------|--------|
| | R058L7W | | R058L9W | | R069L8W | |
| Item Number | Single | Double | Single | Double | Single | Double |
| Pane | Single | Double | Single | Double | Single | Double |
| Visible Light Transmitted | 7% | | 16% | | 31% | 29% |
| Visible Light Reflected (Interior) | 11% | | 11% | | 9% | 10% |
| Visible Light Reflected (Exterior) | 14% | | 9% | | 14% | 21% |
| Ultra Violet Block | 99% | | 99% | | 99% | 99% |
| Total Solar Energy Reflected | 20% | | 10% | | 15% | 19% |
| Total Solar Energy Transmitted | 12% | | 15% | | 33% | 28% |
| Total Solar Energy Absorbed | 68% | | 75% | | 52% | 53% |
| Emissivity (Room Side) | 0.78 | | 0.86 | | 0.87 | 0.87 |
| Glare Reduction | 92% | | 83% | | 65% | 65% |
| Selective InfraRed Reduction (SIRR) | 82% | | 85% | | 65% | 65% |
| InfraRed Energy Rejection (IRER) | 64% | | 63% | | 49% | 49% |
| Shading Coefficient | 0.35 | | 0.44 | | 0.56 | 0.66 |
| Solar Heat Gain Coeff. (G-Value) | 0.30 | | 0.38 | | 0.48 | 0.58 |
| U-Value Winter (IP) | 1.01 | | 1.05 | | 1.05 | 0.48 |
| U-Value Winter (SI) | 5.73 | | 5.80 | | 6.00 | 2.75 |
| Luminous Efficacy | 0.20 | | 0.36 | | 0.55 | 0.44 |
| Total Solar Energy Rejected (%) | 70% | | 62% | | 52% | 42% |

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

About Avery Dennison

Avery Dennison (NYSE: AVY) is a global materials science and manufacturing company specializing in the design and manufacture of a wide variety of labeling and functional materials. Headquartered in Glendale, California, the company employs approximately 30,000 employees in more than 50 countries. Reported sales in 2017 were \$ 6.6 billion. Learn more at www.averydennison.com



Graphics Solutions

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