



## Non-Metalized Non-Reflective

### Classic Pro Black™

**clas•sic** | klās'ik | serving as the established model or standard

### Classic Pro Charcoal™

### Retro Black™

**ret•ro** | rĕt'rō | reviving of things past

### Retro Charcoal™

### Excel™

**ex•cel** | ĩk-sĕl' | to do better than, to surpass.

*Dyed, non-metalized window films that offers privacy, UV protection, and heat control.*

|    | Light Transmission | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    | Interior                  | Exterior |                        |                       |              |
| 5  | 5%                 | 5%                        | 5%       | 1.5 M                  | 45%                   | 99%          |
| 15 | 13%                | 5%                        | 5%       | 1.5 M                  | 42%                   | 99%          |
| 20 | 22%                | 5%                        | 5%       | 1.5 M                  | 39%                   | 99%          |
| 35 | 35%                | 5%                        | 5%       | 1.5 M                  | 38%                   | 99%          |
| 50 | 51%                | 5%                        | 5%       | 1.5 M                  | 34%                   | 99%          |

|    |     |    |    |       |     |     |
|----|-----|----|----|-------|-----|-----|
| 5  | 5%  | 5% | 5% | 1.5 M | 45% | 99% |
| 15 | 13% | 5% | 5% | 1.5 M | 42% | 99% |
| 20 | 22% | 5% | 5% | 1.5 M | 39% | 99% |
| 35 | 35% | 5% | 5% | 1.5 M | 38% | 99% |
| 50 | 51% | 5% | 5% | 1.5 M | 34% | 99% |

|    | Light Transmission | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    | Interior                  | Exterior |                        |                       |              |
| 5  | 5%                 | 5%                        | 5%       | 1.5 M                  | 45%                   | 99%          |
| 15 | 13%                | 5%                        | 5%       | 1.5 M                  | 42%                   | 99%          |
| 20 | 22%                | 5%                        | 5%       | 1.5 M                  | 39%                   | 99%          |
| 35 | 35%                | 5%                        | 5%       | 1.5 M                  | 38%                   | 99%          |
| 50 | 51%                | 5%                        | 5%       | 1.5 M                  | 34%                   | 99%          |

|    |     |    |    |       |     |     |
|----|-----|----|----|-------|-----|-----|
| 5  | 5%  | 5% | 5% | 1.5 M | 45% | 99% |
| 15 | 18% | 5% | 5% | 1.5 M | 41% | 99% |
| 20 | 22% | 5% | 5% | 1.5 M | 39% | 99% |
| 35 | 35% | 5% | 5% | 1.5 M | 35% | 99% |
| 40 | 43% | 5% | 5% | 1.5 M | 33% | 99% |
| 50 | 52% | 5% | 5% | 1.5 M | 30% | 99% |

|    | Light Transmission | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    | Interior                  | Exterior |                        |                       |              |
| 5  | 7%                 | 5%                        | 5%       | 1.5 M                  | 48%                   | 99%          |
| 15 | 16%                | 5%                        | 5%       | 1.5 M                  | 44%                   | 99%          |
| 20 | 22%                | 5%                        | 5%       | 1.5 M                  | 40%                   | 99%          |
| 30 | 30%                | 5%                        | 5%       | 1.5 M                  | 38%                   | 99%          |
| 35 | 35%                | 5%                        | 5%       | 1.5 M                  | 37%                   | 99%          |
| 45 | 43%                | 5%                        | 5%       | 1.5 M                  | 36%                   | 99%          |
| 50 | 50%                | 5%                        | 5%       | 1.5 M                  | 35%                   | 99%          |
| 60 | 61%                | 5%                        | 5%       | 1.5 M                  | 29%                   | 99%          |
| 70 | 68%                | 5%                        | 5%       | 1.5 M                  | 25%                   | 99%          |
| 88 | 88%                | 5%                        | 5%       | 1.5 M                  | 20%                   | 99%          |

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**Important:** All tested materials were applied on a 1/4" clear glass surface in accordance with industry standard tests. The intended purpose of the data provided is for comparison purposes only.

*We set the standard.*

## Non-Metalized IR-Performance (IRP)

### Carbon SX™

*Carbon Ceramic Technology*

**car•bon** | kār'bən | a nonmetal which has two main forms (diamond and graphite)

### Carbon SIR II™

*Nano-Ceramic Technology*

### Carbon Ultra™

*Nano-Ceramic Technology*

### Carbon Ultra IR™

*Nano-Ceramic Technology*

### CarbonS 4Mil™

*Carbon Ceramic Technology*

American Standard Window Film has set the standard for the profession. All products feature 99% U/V rejection, an ultra durable hard coat, manufactured in the latest state of the art facility in Las Vegas, Nevada. And, a factory backed warranty.

*ASWF's exclusive IRP family films utilizes a state of the art nano-ceramic technology offering superior heat rejection.*

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 03 | 4%                 | 46%      | 43%      | 4.6%                      | 4.5%     | 2.0 Mil                | 51.3%                 | 99%          |
| 05 | 7%                 | 46%      | 43%      | 4.9%                      | 4.5%     | 2.0 Mil                | 49.8%                 | 99%          |
| 15 | 16%                | 46%      | 43%      | 4.6%                      | 4.5%     | 2.0 Mil                | 46.6%                 | 99%          |
| 20 | 22%                | 46%      | 43%      | 4.5%                      | 4.6%     | 2.0 Mil                | 44.5%                 | 99%          |
| 35 | 37%                | 46%      | 43%      | 5.1%                      | 5.0%     | 2.0 Mil                | 38.8%                 | 99%          |
| 40 | 42%                | 46%      | 43%      | 5.7%                      | 5.4%     | 2.0 Mil                | 35.8%                 | 99%          |
| 50 | 48%                | 46%      | 43%      | 5.5%                      | 5.5%     | 2.0 Mil                | 36.3%                 | 99%          |
| 70 | 77%                | 67%      | 63%      | 7.6%                      | 7.3%     | 1.5 Mil                | 35.6%                 | 99%          |

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 03 | 3%                 | 64%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 59.0%                 | 99%          |
| 05 | 6%                 | 60%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 56.0%                 | 99%          |
| 15 | 14%                | 60%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 54.0%                 | 99%          |
| 20 | 20%                | 60%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 52.0%                 | 99%          |
| 35 | 35%                | 60%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 57.0%                 | 99%          |
| 40 | 40%                | 60%      | 63%      | 4%                        | 4%       | 2.0 Mil                | 44.0%                 | 99%          |
| 50 | 48%                | 60%      | 63%      | 5%                        | 5%       | 2.0 Mil                | 42.0%                 | 99%          |
| 60 | 60%                | 60%      | 63%      | 6%                        | 6%       | 2.0 Mil                | 39.0%                 | 99%          |
| 70 | 80%                | 60%      | 63%      | 7%                        | 7%       | 2.0 Mil                | 33.0%                 | 99%          |

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 05 | 7%                 | 84%      | 80%      | 4.8%                      | 4.8%     | 2.0 Mil                | 64.3%                 | 99%          |
| 15 | 16%                | 84%      | 80%      | 5.0%                      | 4.7%     | 2.0 Mil                | 61.5%                 | 99%          |
| 20 | 20%                | 84%      | 80%      | 5.1%                      | 4.8%     | 2.0 Mil                | 59.6%                 | 99%          |
| 35 | 37%                | 84%      | 80%      | 5.8%                      | 5.4%     | 2.0 Mil                | 53.8%                 | 99%          |
| 40 | 43%                | 84%      | 80%      | 5.9%                      | 5.4%     | 2.0 Mil                | 52.0%                 | 99%          |
| 50 | 53%                | 81%      | 78%      | 5.9%                      | 5.3%     | 1.5 Mil                | 48.9%                 | 99%          |
| 70 | 73%                | 81%      | 78%      | 7.3%                      | 7.1%     | 1.5 Mil                | 42.6%                 | 99%          |

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 05 | 5.0%               | 93%      | 90%      | 5.2%                      | 4.3%     | 2.4 Mil                | 69.9%                 | 99%          |
| 15 | 13.3%              | 93%      | 90%      | 5.2%                      | 4.5%     | 2.4 Mil                | 65.8%                 | 99%          |
| 20 | 15.6%              | 93%      | 90%      | 5.4%                      | 4.6%     | 2.4 Mil                | 66.0%                 | 99%          |
| 35 | 29.4%              | 93%      | 90%      | 5.6%                      | 4.9%     | 2.4 Mil                | 60.4%                 | 99%          |
| 50 | 55.0%              | 93%      | 90%      | 6.0%                      | 6.5%     | 2.4 Mil                | 52.0%                 | 99%          |
| 70 | 71.3%              | 93%      | 90%      | 7.0%                      | 7.0%     | 1.5 Mil                | 48.0%                 | 99%          |

|         | Light Transmission | IR 09-10 | IR Rejected | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|---------|--------------------|----------|-------------|---------------------------|----------|------------------------|-----------------------|--------------|
|         |                    |          |             | Interior                  | Exterior |                        |                       |              |
| 4Mil 05 | 8%                 | 46%      | 43%         | 4.5%                      | 4.6%     | 4.4 Mil                | 50.0%                 | 99%          |
| 4Mil 15 | 17%                | 46%      | 43%         | 4.6%                      | 4.7%     | 4.4 Mil                | 46.1%                 | 99%          |
| 4Mil 20 | 22%                | 46%      | 43%         | 4.8%                      | 4.8%     | 4.4 Mil                | 44.8%                 | 99%          |
| 4Mil 35 | 37%                | 46%      | 42%         | 5.1%                      | 5.0%     | 4.4 Mil                | 38.8%                 | 99%          |

## Non-Metalized IRP (cont.)

### Excel IRP™

*Nano-Ceramic Technology*

**ex•cel** | ĩk-sĕl' | to do better than, to surpass.

### Dimension IRP™

*Nano-Ceramic Technology*

**di•men•sion** | dĭ-mĕn'shən | a measure of spacial extent

## High-Performance

### Performer™

**per•form•er** | pĕr-fŏr'mĕr | something that takes action from the requirements, to fulfill.

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 5  | 5%                 | 83%      | 85%      | 4%                        | 4%       | 2.0 M                  | 66%                   | 99%          |
| 15 | 16%                | 78%      | 83%      | 4%                        | 4%       | 1.5 M                  | 62%                   | 99%          |
| 20 | 22%                | 78%      | 83%      | 4%                        | 4%       | 1.5 M                  | 60%                   | 99%          |
| 35 | 35%                | 78%      | 83%      | 5%                        | 5%       | 1.5 M                  | 56%                   | 99%          |
| 40 | 42%                | 78%      | 83%      | 5%                        | 5%       | 1.5 M                  | 53%                   | 99%          |
| 50 | 53%                | 78%      | 83%      | 5%                        | 5%       | 1.5 M                  | 50%                   | 99%          |
| 70 | 75%                | 78%      | 83%      | 6%                        | 6%       | 1.5 M                  | 42%                   | 99%          |
| 80 | 79%                | 75%      | 76%      | 6%                        | 6%       | 1.5 M                  | 40%                   | 99%          |

|    | Light Transmission | IR 78-25 | IR 09-10 | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|----------|----------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    |          |          | Interior                  | Exterior |                        |                       |              |
| 5  | 4%                 | 90%      | 94%      | 4%                        | 5%       | 2.0 M                  | 79%                   | 99%          |
| 15 | 15%                | 90%      | 94%      | 4%                        | 4%       | 1.5 M                  | 65%                   | 99%          |
| 20 | 20%                | 90%      | 94%      | 4%                        | 4%       | 1.5 M                  | 64%                   | 99%          |
| 35 | 38%                | 90%      | 94%      | 5%                        | 4%       | 1.5 M                  | 58%                   | 99%          |
| 50 | 49%                | 90%      | 94%      | 5%                        | 5%       | 1.5 M                  | 56%                   | 99%          |
| 70 | 70%                | 90%      | 94%      | 6%                        | 6%       | 1.5 M                  | 49%                   | 99%          |
| 80 | 77%                | 77%      | 82%      | 6%                        | 6%       | 1.5 M                  | 42%                   | 99%          |

*A dyed, metalized window film with a non-reflective aesthetic that reflects solar heat.*

|    | Light Transmission | Visible Light Reflectance |          | Construction Thickness | Solar Energy Rejected | U/V Rejected |
|----|--------------------|---------------------------|----------|------------------------|-----------------------|--------------|
|    |                    | Interior                  | Exterior |                        |                       |              |
| 3  | 4%                 | 9%                        | 6%       | 1.5 M                  | 66%                   | 99%          |
| 5  | 6%                 | 8%                        | 6%       | 1.5 M                  | 54%                   | 99%          |
| 15 | 16%                | 11%                       | 8%       | 1.5 M                  | 52%                   | 99%          |
| 20 | 19%                | 11%                       | 8%       | 1.5 M                  | 51%                   | 99%          |
| 30 | 30%                | 11%                       | 8%       | 1.5 M                  | 50%                   | 99%          |
| 35 | 37%                | 11%                       | 8%       | 1.5 M                  | 47%                   | 99%          |
| 50 | 55%                | 11%                       | 8%       | 1.5 M                  | 40%                   | 99%          |
| 60 | 65%                | 11%                       | 8%       | 1.5 M                  | 35%                   | 99%          |

