

# PRODUCT DATA SHEET

## Avery Dennison® Exterior Reflective Solar Films

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### Introduction

Avery Dennison® R Silver X films provide maximum energy efficiency and value. By rejecting excess solar radiation, Avery Dennison® R Silver films cut heat buildup through the glazing. Avery Dennison® R Silver X films are particularly energy efficient on insulated glass (IGU), rejecting solar energy on the outer pane, keeping the inner pane cool thereby reducing the HVAC load still further.

Avery Dennison® R Silver 20X Poly is engineered with a novel adhesive formulation to ensure compatibility with plastic substrates.

Avery Dennison DS Bronze 20X delivers a high level of heat rejection in a warm coppery appearance.

### Conversion

For conversion information please review the Technical Bulletin "Avery Dennison® Solar Window Films Exterior".

### Recommendations

These films are especially energy efficient when used on advanced glazing systems, rejecting the solar energy before it is transmitted through a window. The Poly version is based on a unique adhesive system designed for rigid plastic substrates. Typical applications include commercial buildings. A silver (mirror like) finish is available in three different light transmission levels.

### Features

- » Highest level of energy efficiency
- » Excellent solar heat and glare rejection
- » Upgraded building appearance
- » Daytime privacy
- » 99+% UV block

**Fire Certification:** B-s1, d0 (DIN EN 13501-1)

<b>Warranted Durability<sup>1)</sup>:</b>	R Silver 20X	R Silver 35X	R Silver 50X	R Silver 20X Poly	DS Bronze 20X
Vertical	7 years	7 years	4 years	4 years	4 years
Horizontal/SI oped	4 years	4 years	3 years	3 years	2.5 years

1) Warranted Durability



#### Face Film

Exterior durable SR hard coat vacuum metal deposition, with a thin optical Aluminum layer; R Silver 20X; R Silver 35X; R Silver 50X; R Silver 20X Poly; DS Bronze 20X



#### Adhesive

Pressure sensitive Permanent – Solvent based acrylic



#### Backing

PET



#### Durability

See below



#### Shelf Life

When stored in original packaging upon arrival at the customer: 2 years. Recommended Storage conditions are 20 °C (± 2 °C) with 50 %RH (± 5%).

The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased. With regard to Avery Dennison Architectural Window Film Products, the durability shall not differ between the climatic zones, but the same durability shall apply to all climatic zones.

## Physical Characteristics

### Optical & Solar Properties:

	R Silver 20X		R Silver 35X		R Silver 50X		R Silver 20X Poly	DS Bronze 20X	
	Single Pane	Double Pane	Single Pane	Double Pane	Single Pane	Double Pane	Single Pane	Single Pane	Double Pane
Visible Light Transmitted %	17	16	33	31	48	44	16	17	16
Visible Light Reflected (Int) %	62	62	42	44	28	32	63	45	45
Visible Light Reflected (Ext) %	62	62	42	43	27	29	64	40	43
U V Block %	99	99	99	99	99	99	99	99	99
Total Solar Energy Reflected %	63	64	45	46	30	32	65	53	47
Total Solar Energy Transmitted %	12	11	25	22	37	31	12	9	8
Total Solar Energy Absorbed %	25	25	30	32	33	37	23	38	45
Shading Coefficient	0,22	0,18	0,39	0,32	0,53	0,44	0,22	0,23	0,35
Total Solar Energy Rejected %	81	85	66	72	54	62	81	81	70
Solar Heat Gain Coefficient	0,19	0,15	0,34	0,28	0,46	0,38	0,19	0,19	0,30
Emissivity (Room side)	0,84	0,84	0,84	0,84	0,84	0,84	0,84	0,69	0,69
U-Value Winter	1,04	0,48	1,04	0,48	1,04	0,48	1,04	0,96	0,46
K-Value Winter	5,91	2,73	5,91	2,73	5,91	2,73	5,91	5,45	2,61
Glare Reduction %	81	80	63	62	46	45	82	81	81
Luminous Efficacy	0,75	0,91	0,84	0,96	0,90	0,90	0,75	0,74	0,45

### Important

Information on physical and chemical characteristics and values in this document are based upon tests we believe to be reliable and do not constitute a warranty. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

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