# Avery Dennison<sup>®</sup> Instructional Bulletin 1.3 Durability of Avery Dennison Films

#### Introduction

The expected durability of Avery Dennison films are defined as the expected performance life of the Avery Dennison graphic film(s) within the ANZ region in outdoor vertical exposure conditions. The durability communicated via Avery Dennison product data sheets is not defined as the period of time the film is warranted for, warranted periods for Avery Dennison films can be found in the corresponding ICS Performance Guarantee Bulletin.

#### Expected Durability and Warranted Period Definitions

Expected durability is the expected period of time defined in the product data sheet, the product should, but is not warranted to, perform satisfactorily when applied in vertical exposure conditions as defined in Instructional Bulletin 1.30. The warranted period communicated via the ICS Performance Guarantee Bulletins, is the maximum period of time Avery Dennison will warrant the finished products performance in accordance with ICS Performance Guarantee Terms and Conditions 1.0, provided that the film is properly stored, converted and installed in accordance with Avery Dennison guidelines.

#### Potential Durability Reductions

Actual performance life will depend on a variety of factors, including selection and preparation of the substrate, angle and direction of exposure, application methods, environmental conditions and cleaning and maintenance of the films. In case of films used in areas of high temperatures or humidity, in industrially polluted areas or other areas with air laden particulate matter, and/or in high altitudes, durability will be reduced from that stated in the appropriate Product Data Sheet, Instructional Bulletin and ICS Performance Guarantee Bulletin.

#### Vertical Exposure

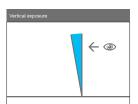
The face of the graphic is  $\pm 10^{\circ}$  from vertical. Vertical durability is as stated in appropriate Product Data Sheets, Instructional Bulletins and ICS Performance Guarantee Durability Bulletins.

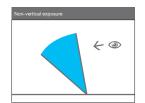
#### Non-Vertical Exposure

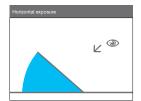
The face of the finished graphic is greater than 10° from vertical and greater than 45° from horizontal. The reduction of durability for non-vertical applications would be 50% less than the stated durability in the appropriate Product Data Sheet, Instructional Bulletin and ICS Performance Guarantee Bulletin.

#### Horizontal Exposure

The face of the finished graphic is 45° to 90° from vertical. Horizontal applications are not warranted and do not have any expectations of durability. The exposure of films in the horizontal position invalidates any performance expectations as stated in the appropriate Product Data Sheet, Instructional Bulletin and ICS Performance Guarantee Bulletin, unless otherwise stated. Films may retain legibility, but will not provide published Expected Durability for gloss, colour retention, chalking, dimensional stability and overall aesthetic performance.









#### Zone System, Australia and New Zealand

Durability for regions located in Zone 2 may be stated in ICS Performance Guarantee Durability Bulletins and other warranty documents issued by Avery Dennison Australia and New Zealand. Therefore, films used in regions identified as Zone 3 will have a reduction of the stated durability by 40%. If the film were applied whereby a combination of non-vertical and Zone 3 exposure, the cumulative effect of the reduced exposures would apply. Therefore the non-vertical exposure in Zone 3 would be 70% less than the stated durability.

## Zone and Non-Vertical Reduction Examples Australia and New Zealand

Zone 1		Zone 2 (values as in this ICS Bulletin)		Zone 3	
Vertical	Non-vertical	Vertical		Vertical	
100%	-50% of Zone 1 Vertical	-30% Zone 1 Vertical	-50% Zone 2 Vertical	-40% Zone 2 Vertical	-70% of Zone 2 Vertical
7	3.5	5	2.5	3	1.5
5	2.5	3.5	1.75	2	1
4	2	3	1.5	1.75	0.75
3	1.5	2	1	1	-
					Dunahilitu in un an

Durability in years

# Zone Chart Australia and New Zealand

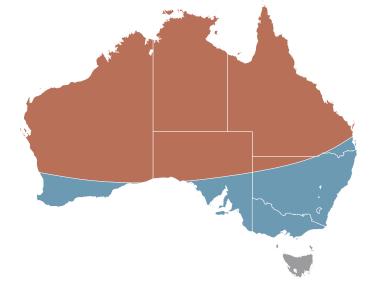
Zone 1	Zone 2				
Tasmania and New Zealand (South Island).	Adelaide, Albany, Brisbane, Canberra, Esperance, Melbourne, New Zealand (North Island), Perth, Sydney.				

Zone 3

Alice Springs, Broken Hill, Broome, Cairns, Carnarvon, Ceduna, Coffs Harbour, Cook, Darwin, Dubbo, Geraldton, Kalgoorlie, Mackay, Mount Isa, Newman, Port Augusta, Port Hedland, Telfer, Townsville.

All areas 100km North of line between Perth and Brisbane.

All locations (mentioned in zones 1, 2 and 3) when installed above altitudes of 1000 meters.







# Zone System Global

See country/area zone classification below.

Zone 1	Zone 2			Zone 3
Austria	Afghanistan	Gabon	Niger	Exposed at all sites above
Australia (Tasmania)	Albania	Gambia	Nigeria	altitudes of 1000 meters
Belgium	Algeria	Ghana	Pakistan	Australia – Above a line
Belarus	Andorra	Greece	Panama	100km north of
Bosnia &	Angola	Grenada	Papua New Guinea	Perth/Brisbane
Denmark	Arizona	Guatemala	Paraguay	Australia – Desert areas
Estonia	Armenia	Guinea	Peru	
Finland	Australia*	Guinea-Bissau	Philippines	Bahrain
France*	Azerbaijan	Guyana	Portugal	Chad
Herzegovina	Bahamas	Haiti	Puerto Rico	Egypt
Ecuador	Bangladesh	Honduras	Rwanda	Eritrea
Georgia	Barbados	India	Samoa	Ethiopia
Germany	Belize	Indonesia	San Marino	Iraq
Hungary	Bhutan	lvory Coast	Sao Tome & Principe	Israel
Iceland	Bolivia	Jamaica	Senegal	Jordan
Italy	Botswana	Japan	Sierra Leone	Kuwait
Latvia	Brazil	Kazakhstan	Singapore	Lebanon
Liechtenstein	Burkina Faso	Kenya	South Africa	Libya
Lithuania	Burundi	Korea (South)	Southwest Texas	Mexico
Luxembourg	California	Kyrgyzstan	Spain	Morocco
Macedonia	Cambodia	Laos	Sri Lanka	Oman
Monaco	Cameroon	Lesotho	Suriname	Qatar
Netherlands, the	Cape Verde	Liberia	Swaziland	Saudi Arabia
New Zealand	Caribbean Isles	Madagascar	Taiwan	Somalia
Norway	Central African	Malaysia	Tanzania	Tunisia
Poland	Rep.	Maldives	Texas	United Arab
Romania	Chile	Mali	Thailand	Emirates
Russia	China	Malta	Togo	Yemen
Slovakia	Colombia	Mauritania	Trinidad & Tobago	1 cm cm
Slovenia	Congo	Mauritius	Turkey	
Sweden	Costa Rica	Micronesia	Turkmenistan	
Switzerland	Cyprus	Moldova	Uganda	
United Kingdom	Dominica	Mozambique	Ukraine	
United States of America*	Dominican	Myanmar (Birma)	Uruguay	
Uzbekistan	Republic	Namibia	Utah	
Vatican City	East Timor	Nepal	Venezuela	
Yugoslavia	El Salvador	Nevada	Vietnam	
i ugoslavia	Equatorial Guinea	New Mexico	Zambia	
*except desert areas of the	Fiji	Nicaragua	Zimbabwe	
States mentioned in Zone 2	Florida (Southern)	inicalagua	ZIIIDADWC	
			*Exceptions classified in Zone 3	

## Additional Information

High Elevations - Mountain area UV damage is increased over exposures at sea level. This is due to the air being thinner, and therefore damage from UV filtering increases significantly.

Congested Urban or Industrial Areas - Due to increased smog, pollutants, and particulates in the atmosphere in congested urban and industrial areas horizontal applications have reduced durability expectations. The horizontal application traps the chemicals on the surface of the material, and increased UV exposure combine for reduced durability.

Questions regarding the durability of a specific product should be directed to your Avery Dennison sales, marketing or technical representative.

\*For further information on performance and warranted periods within the ANZ region, please see the corresponding ICS Performance Guarantee Bulletin for your specific printer and ink combination or film type.

