

Avery Dennison® 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

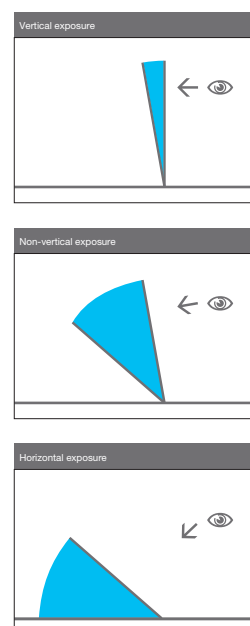
The face of the graphic is $\pm 10^\circ$ from vertical. Vertical durability is as stated in appropriate Product Data Sheets, Instructional Bulletins and ICS Performance Guarantee Durability Bulletins.

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

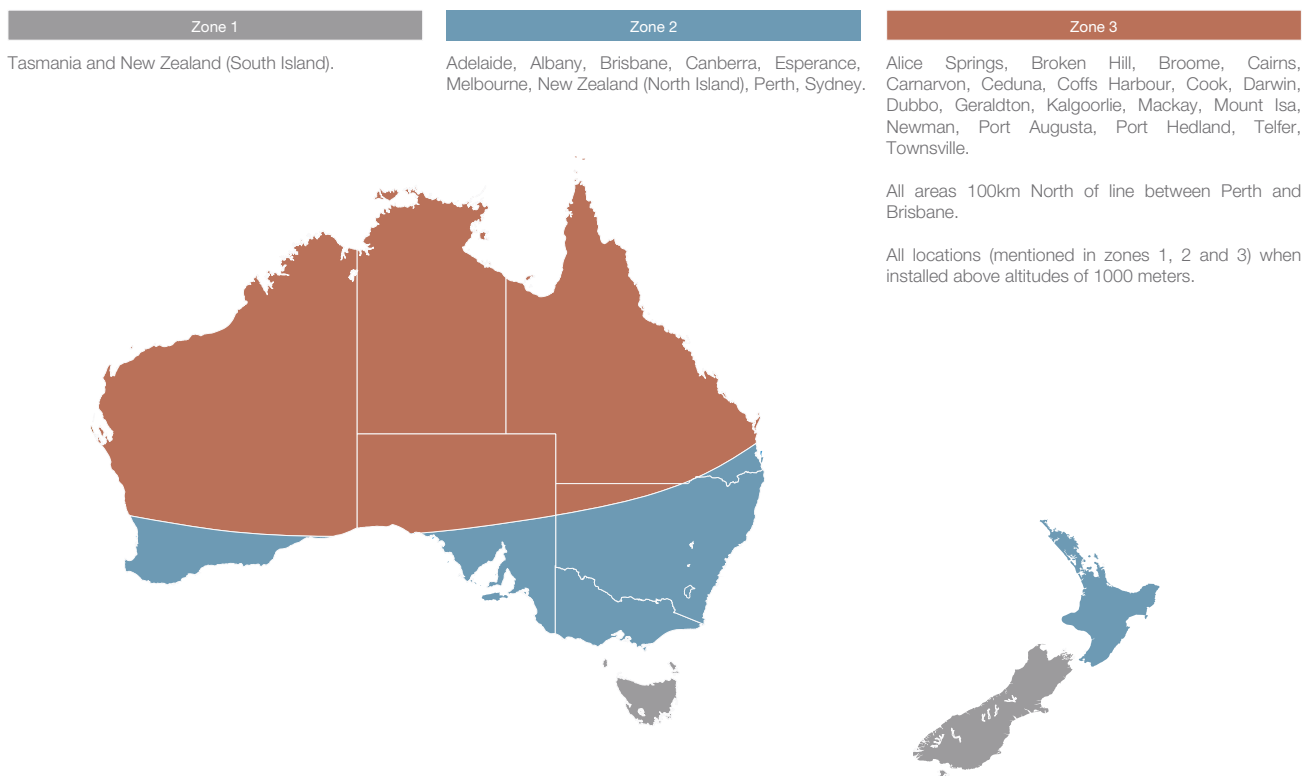
Durability for regions located in Zone 2 may be stated in ICS Performance Guarantee Durability Bulletins and other warranty documents issued by Avery Dennison Australia and New Zealand. Therefore, films used in regions identified as Zone 3 will have a reduction of the stated durability by 40%. If the 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	Non-vertical	Vertical	Non-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	-

Durability in years

Zone Chart Australia and New Zealand



Zone System Global

See country/area zone classification below.

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