

1.0 Durability and Climatic Zones

Introduction

In general, the maximum durability for our products is ensured for vertical outdoor exposure only. We define a deviant application $\geq 10^\circ$ as a horizontal application. General information regarding the basis of evaluating the maximal durability can be found in our data sheets which are based only on the condition that vertical application in a moderate climate is undertaken.

Influencing Variables

In addition to horizontal/vertical application, also different climates can have a significant influence. Due to the additional influences like mechanical abrasion, chemical influences, altitude etc. it is not possible to transfer the maximum durability on each product. Consequently no warranty claims can be derived from the above information.

Applicability

The specification is valid for products suitable for vertical and horizontal application only. For products recommended for vertical use only, the vertical durability applies only to vertical uses and a horizontal durability is not applicable.

Special Locations

High elevations	In mountain areas UV damage is increased over exposures at sea level. This is due to the air being thinner, and therefore damage from UV radiation 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, increasing the impact of UV exposure and reducing durability.

Durability in years

Climatic Zone 1 (moderate)		Climatic Zone 2 (humid / warm)		Climatic Zone 3 (dry / hot)	
vertical	horizontal	vertical	horizontal	vertical	horizontal
12	6	10	5	8	4
11	5,5	9	4,5	7	3,5
10	5	8	4	6	3
9	4,5	7	3,5	5	2,5
8	4	6	3	4	2
7	3,5	5	2,5	3	1,5
6	3	4	2	2	1
5	2,5	3	1,5	1,5	0,75
4	2	2	1	1	0,5
3	1,5	1	0,5	0,5	0,25
2	1	-	-	-	-
1	0,5	-	-	-	-

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Climatic Zones – Country Overview				
Climatic Zone 1 (moderate)	Climatic Zone 2 (tropical)			Climatic Zone 3 (subtropical)
Albania Andorra Austria Belarus Belgium Bosnia & Herzegovina Bulgaria Croatia Czech Republic Denmark Ecuador Estonia Finland France Georgia Germany Hungary Iceland Ireland Italy Kosovo Latvia Liechtenstein Lithuania Luxembourg Macedonia F.Y.R. Moldova Monaco Montenegro Netherlands, the Norway Poland Romania Russia San Marino Serbia Slovakia Slovenia Sweden Switzerland Ukraine United Kingdom USA* Vatican City <i>*Except desert areas of the States mentioned in Zone 2</i>	Afghanistan Angola Armenia Australia** Azerbaijan Bahamas Bangladesh Barbados Belize Benin Bhutan Bolivia Botswana Brazil Burkina Faso Burundi Cambodia Cameroon Cape Verde Caribbean Isles Central African Rep. Chile China Colombia Congo Costa Rica Cote d'Ivoire Cyprus Dominica Dominican Republic East Timor El Salvador Equatorial Guinea Fiji Gabon Gambia Ghana Greece Grenada Guatemala Guinea Guinea-Bissau Guyana Haiti Honduras India Indonesia Jamaica	Japan Kazakhstan Kenya Korea (South) Kyrgyzstan Laos Lesotho Liberia Madagascar Malawi Malaysia Maldives Mali Malta Mauritania Mauritius Micronesia Mozambique Myanmar (Burma) Namibia Nepal New Zealand 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 Spain Sri Lanka Suriname Swaziland Taiwan Tajikistan Tanzania Thailand	Togo Trinidad & Tobago Turkey Turkmenistan Uganda Uruguay Uzbekistan Venezuela Vietnam Zambia Zimbabwe Arizona* California* Florida (Southern)* Nevada* New Mexico* Texas* Utah* <i>*Exceptions classified in Zone 3</i>	All sites over 1000 m above sea level Algeria Australia** – Above a line 100 km north of Perth/Brisbane Australia** – Desert areas Bahrain Chad Egypt Eritrea Ethiopia Iraq Israel Jordan Kuwait Lebanon Libya Mexico Morocco Oman Qatar Saudi Arabia Somalia Tunisia United Arab Emirates Yemen

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Important Notice

Information on physical and chemical characteristics is based upon tests, practical knowledge and experience. The values listed herein are typical values and are not for use in specifications. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Because of the variety of uses and applications, the purchasers should independently determine, prior to use, the suitability of this material to their specific use and carefully consider the suitability and performance of the product. The purchaser shall assume all risks for any use and application of the material. All specifications and technical data are subject to change without prior notice, errors and omissions expected. All warranty matters are regulated by our general terms and conditions.