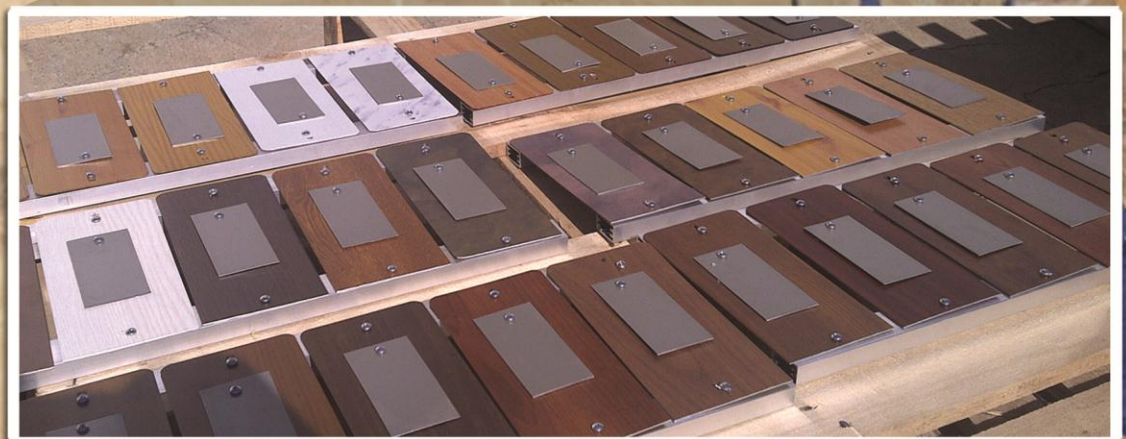


# Natural Exposure Test Cyprus

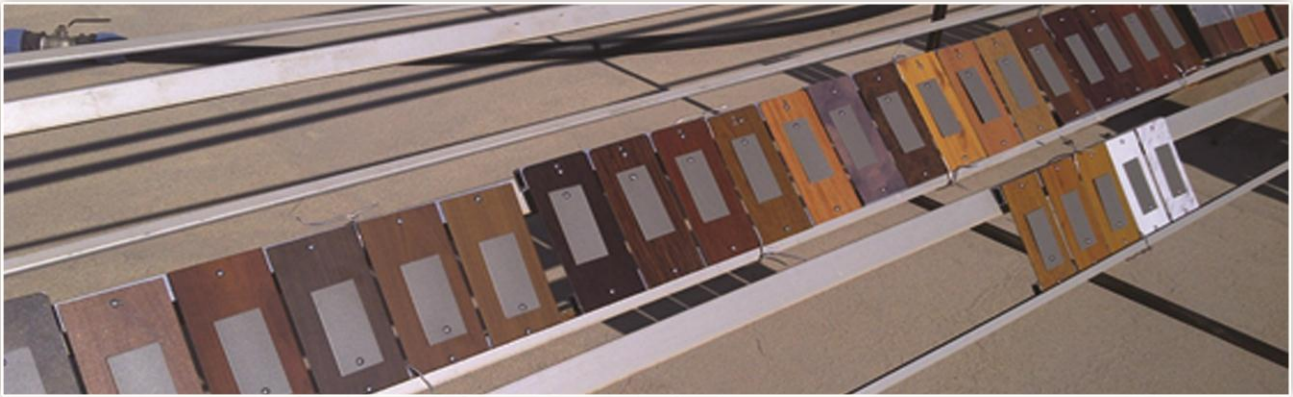


CYPRUS



# NATURAL EXPOSURE

Cyprus



**Natural exposure in Florida is a mandatory test required for all international specifications.** It's an absolutely binding condition for assessing the durability of coatings and decorations in outdoor environments.

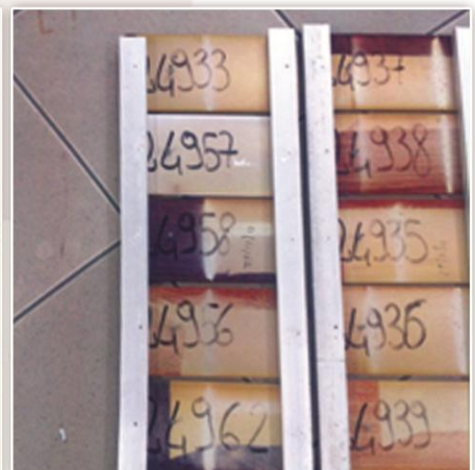
Tests are conducted according to **ISO 2810: 2004**. Exposure testing is performed at a **tilt angle of 5° from the horizontal facing south**. I.E. hit by the highest quantity of incident radiation, for **12 months**.

Normally, the most of outdoor coated aluminium applications are mounted at 90° angle, and climates are normally more forgiving than severe Florida's tropical climate. In conclusion, **Decoral®** tests are conducted under extremely severe conditions.

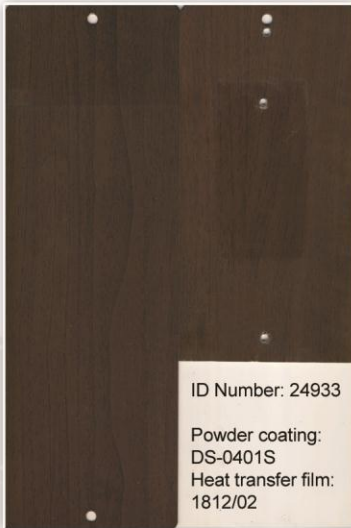
**In an exposure site in Cyprus were exposed the most significant sample panels already tested in Florida, to have a large amount of data and to compare them with European climate.**

**Decoral® Lab** prepared an internal procedure for **Cyprus natural exposure** based on the following steps:

- Size of sample panel: 100x200 mm;
- Measurement of thickness, gloss and color variation ( $\Delta E$ );
- Specimens exposed at a tilt angle of 45° from the horizontal facing south masked in the center (size of covering part: 50x100 mm);
- Proper cleaning and rinse using neutral soap solution and soft sponge to eliminate dusts before every measurement;
- Gloss retention (measured Glossmeter according to ISO 2813, at an angle of 60°);
- Color change (visual comparison) after exposure;
- Enlarging of mask part of 10 mm in each side every time the sample panel is measured to have a visual evaluation of finishing degradation.



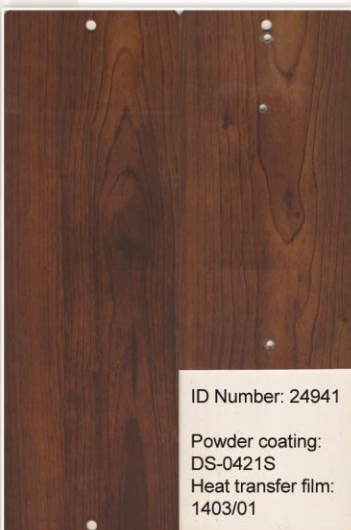
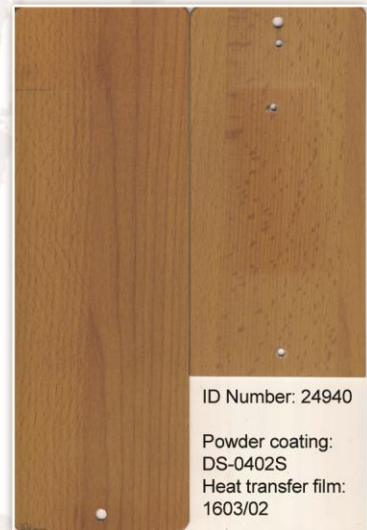
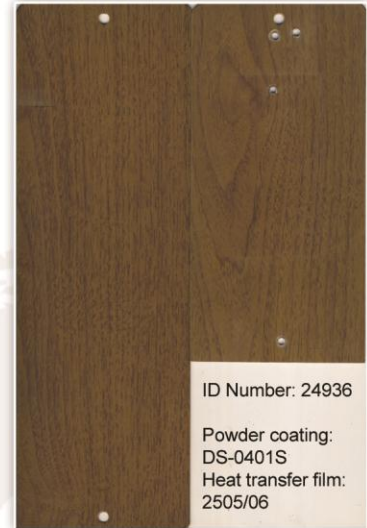
Florida vs Cyprus  
12 months vs 40 months



Florida vs Cyprus  
12 months vs 40 months



Florida vs Cyprus  
12 months vs 40 months



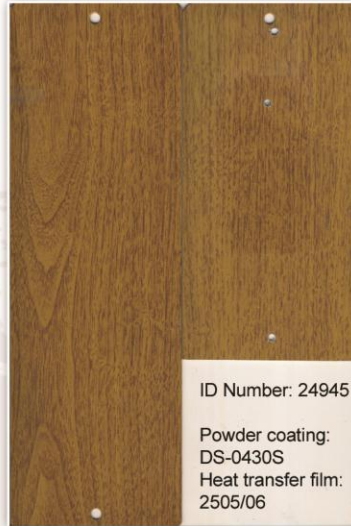
# NATURAL EXPOSURE

Cyprus

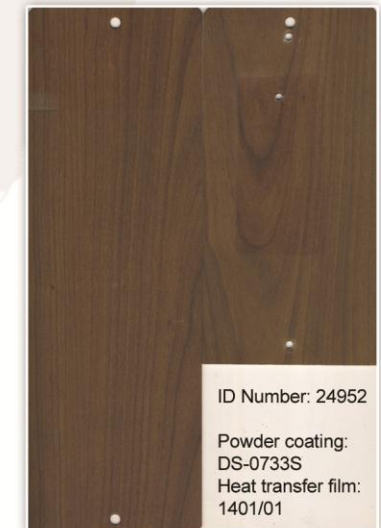
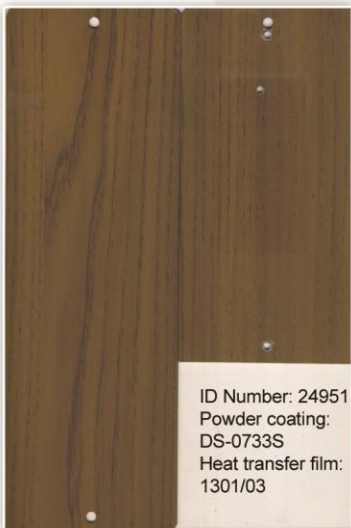
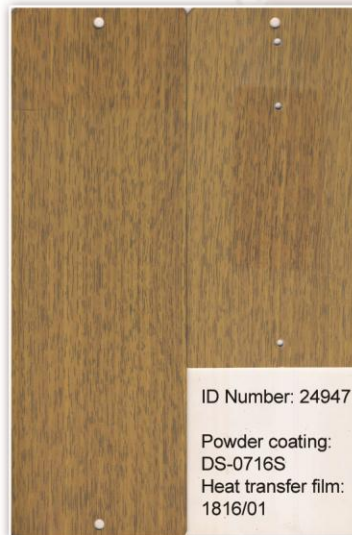
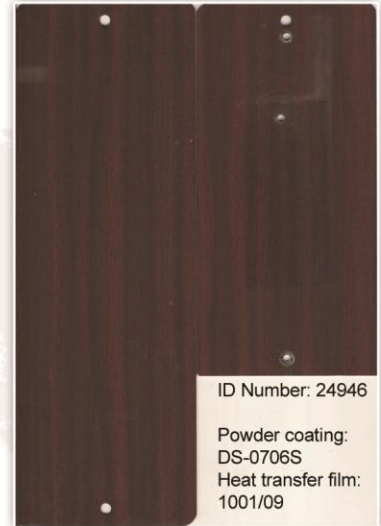
Florida 12 months vs Cyprus 40 months



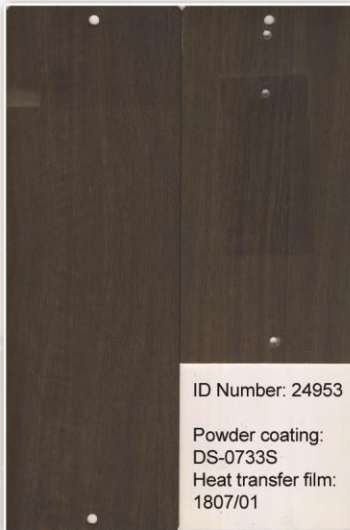
Florida 12 months vs Cyprus 40 months



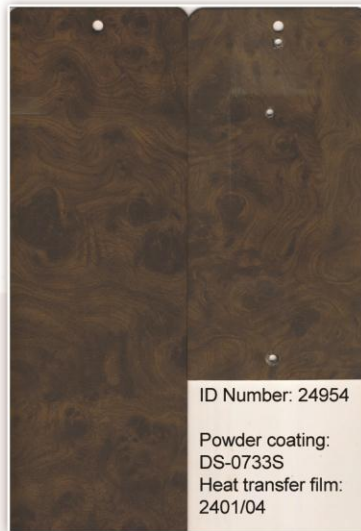
Florida 12 months vs Cyprus 40 months



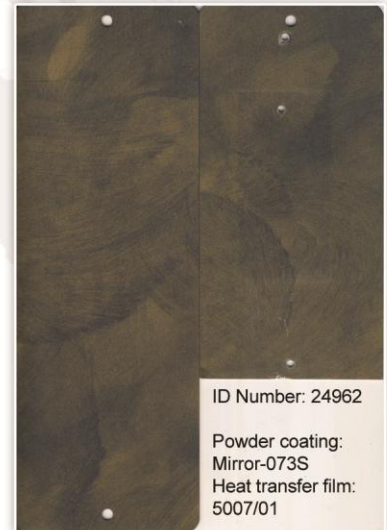
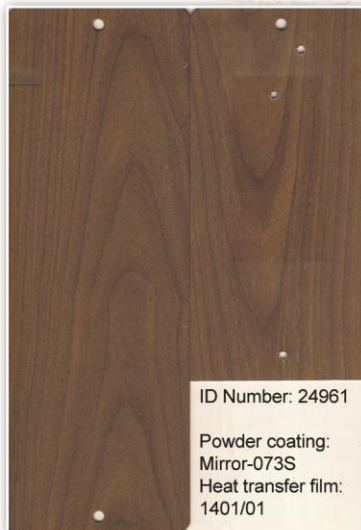
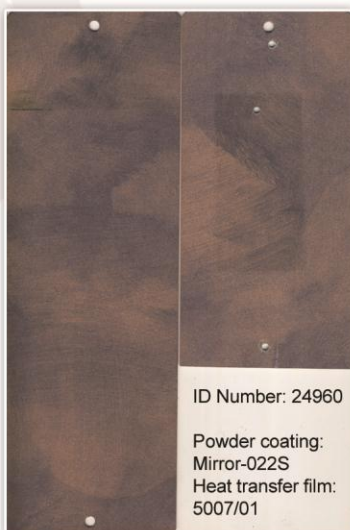
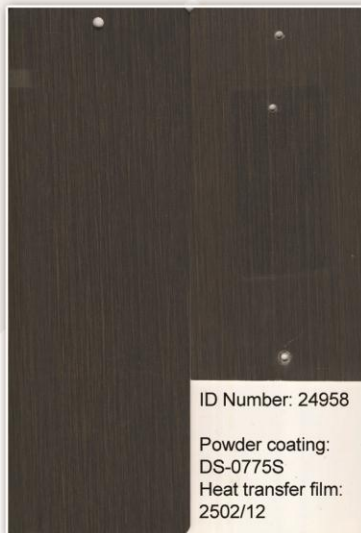
Florida 12 months vs Cyprus 40 months



Florida 12 months vs Cyprus 40 months



Florida 12 months vs Cyprus 40 months



As we can see in previously pictures, deterioration after 40 months of Cyprus natural exposure is lightly higher than 12 months of Florida natural exposition.

# NATURAL EXPOSURE

## Cyprus

In the following pictures are shown some of finishes explained in the previous image after 36 months of exposure in Florida; we can see that **deterioration after 36 months exposure in Florida is higher than 40 months exposition in Cyprus.**

Florida natural exposure



Analysis of residual gloss of sample panels come back from Florida let us to see the strongly of Florida natural exposition test: as shown in third column of following board, **residual gloss after 36 months of Florida natural exposition is lower than residual gloss of sample panels after 40 months of Cyprus natural exposition shown in first column.**

Comparison board of residual gloss

POWDER COATING	HEAT TRANSFER FILM	CYPRUS 40 MONTHS	FLORIDA 12 MONTHS	FLORIDA 36 MONTHS
		Residual gloss (%)	Residual gloss (%)	Residual gloss (%)
DS-0401S	2302/06	84	96	52
DS-0401S	2505/06	102	98	55
DS-0716S	1816/01	80	100	56
DS-0716S	2103/01	79	97	57
DS-0721S	1403/02	100	99	54
DS-0745S	2513/04	84	91	73
DS-0775S	2502/12	85	100	56
Mirror-058S	5001/02	90	93	74
Mirror-022S	5007/01	78	98	75
Mirror-073S	1401/01	80	95	57

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