

DARK COLOUR APPLICATION ON WESTERN RED CEDAR

Mature Western Red Cedar is a naturally durable and stable weatherboard product which is why it is used extensively as a cladding. It is also the go to product for those wanting to use dark stains or paints. Generally speaking a dark stain will heat up more and place greater stresses on the coating and substrate than a lighter colour in the same location. Whether the use of a dark colour coating will cause problems will depend on the coating, the weatherboard selection and the conditions it will be used in.

A weatherboard coated in black stain in an often shaded position in a coastal environment is going to perform much better than in an exposed, north facing location in a hot inland climate with some river stones reflecting more heat from the ground.

When any product exposed to the sun is coated in a dark colour it will heat up, which can affect its dimensions either directly with thermal expansion (e.g. metals) or indirectly through drying out the product causing shrinkage (e.g. timbers). When this happens rapidly or unevenly, it can cause issues but when the face or ends of a weatherboard dry rapidly it can cause cupping or splitting.

Some examples of factors that affect the amount of movement of timber:

External:

- Local humidity levels
- Sun exposure – Direct and indirect e.g. concrete landscaping reflecting heat.
- Substrate moisture levels – e.g. fresh concrete or sub floor airflow into the cavity.

Internal:

- Width of board – Generally the narrower the profile the less movement.
- Type of coating and quality of application.
- Direction of grain of the timber – Vertical / Quarter cut versus Flat / Crown cut.
- Thickness of board – Can have a positive or negative affect on stability.
- Profile selection – center groove can decrease chance of cupping but increase chance of splitting.

At a minimum, we require that an Ex 150mm (approx. 115 mm cover) or smaller profile is selected for dark colours in exposed areas. For further protection, increasing the thickness to 22 mm and ordering or selecting vertical grain timber for the exposed elevations is highly recommended.

Coating product selection, application and maintenance is also very important, we can advise to some degree but you should talk to the coating manufacturer for suitability and instructions. All 4 sides and ends should be coated prior to installation and we recommend that an extra top coat is considered for paints, especially in coastal environments. Please see coating manufacturer for specific requirements.

Disclaimer:

JSC are a manufacturer, and as such will warranty the machined and graded cedar when fixed according to our fixing instructions, it is the coating manufacturer's responsibility to warranty the coating.

We invite you to contact our technical team for further information or advice on 09 412 2810 or email: specification@jsctimber.co.nz.