

Possible problems related to the mixing of different exterior prepainted products

Introduction

A common misconception concerning paint is that if two coatings start out the same colour, then these two coatings will be of equivalent colour throughout their service lives. Unfortunately, this is not generally the case and the purpose of this Technical Bulletin is to discuss some of the potential problems associated particularly with mixing BlueScope's COLORBOND® prepainted steel with the 'same- colour' prepainted product from other sources.

All of these problems relate to the development of a 'differential appearance' over time when painted products are mixed on a single installation. It should be noted that colour difference does not have to be large to be noticeable.

Different paint systems

A major cause of differential appearance is the use of different pigments in two paint systems of the same colour. Close matches to a colour are often achieved with a variety of combinations of pigments and these different combinations may weather to quite different colours.

Another source of differential appearance is the fact that the basic organic resins used in different paint formulations will not be identical and will therefore impart different durability and properties.

The difference in organic resin can lead to two problems:

1. Coatings having different durability will show different performance in terms of gloss and colour retention and the onset of chalking. These differences will probably result in differential discolouration, which can occur rapidly or may only be apparent after long-term exposure; and
2. In some tropical areas, e.g. South- East Asia, the different properties of the organic resins, particularly their performance at elevated ambient temperatures, may give rise to differential darkening or tropical discolouration.

This effect is related to dirt retention and it can appear very rapidly.

It is therefore particularly important that COLORBOND® steel should not be mixed with another prepainted steel supplier's product on the same installation. At some stage the colours of the different products will diverge and differential appearance will result. The use of an alternative product with possibly inferior durability will naturally exacerbate the problem. Rectification of differential appearance is a costly procedure and will at least involve over painting the entire installation.

Stock turnover

Care should also be taken if it is intended to use old COLORBOND® steel stock of the same colour as new stock. This is because the paint formulations used may have changed as part of the continuous COLORBOND® steel performance improvement program.

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