Technical Bulletin 19

May 2019. Revision 7. This issue supersedes all previous issues.



COLORBOND® Metallic prepainted steel

INTRODUCTION

COLORBOND® Metallic prepainted steel offers a range of decorative finishes which are ideal for prestigious building applications.

Due to the nature of pearlescent finishes, as used on COLORBOND® Metallic steel, certain precautions are necessary when ordering and installing this product.

GEOMETRIC METAMERISM

The metallic type paint systems obtain their lustre from the addition of mica particles to the paint. These pigments, whilst being responsible for the metallic appearance, also result in a visual effect known as geometric metamerism.

Geometric metamerism is a phenomenon where the colour of the painted surface will appear to be different dependent upon viewing angles and lighting conditions.

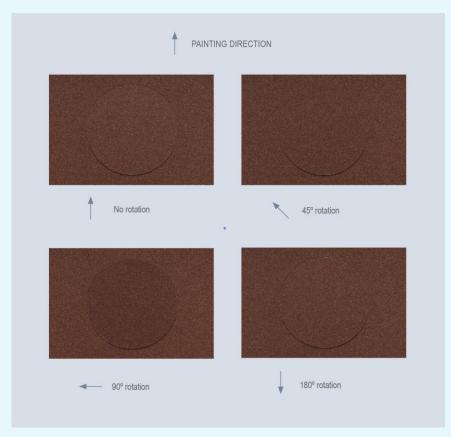
In order to highlight this effect, Figure 1 shows a disc punched from a sample of COLORBOND® Metallic steel in the colour Aries® which has been rotated through 45°, 90° and 180°. As the figure illustrates, when the same material is rotated relative to its original orientation, a significant inherent difference in colour and appearance can be observed.

ORDERING

Due to the sensitive nature of these paint systems, different batches of product may vary slightly in appearance.

In order to minimise appearance differences it is strongly recommended that all requirements for

Figure 1: The effect of metamerism due to rotation of samples



a particular project are processed in one production run using the same batch of paint. The customer should inform the BlueScope Sales Office of all COLORBOND® Metallic steel requirements for a given project so the orders can be batched.

Notifying the BlueScope Sales Office is particularly important when a project calls for various sizes to avoid material being supplied from different batches. Material will be of consistent appearance when painted in the one production run using the same batch of paint.

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ROLLFORMING

Rollformed sections of COLORBOND® Metallic steel often display striking effects due to the varying angles of incident light.

The customer should be aware of this visual effect as well as the potential for variation between vertical and horizontal exposure. Accessories will be subject to different conditions of incident lighting compared to flat roof or wall panels.

INSTALLATION

In order to prevent mismatching, all panels on a project should be aligned in the same direction.

To assist in this regard, BlueScope brands the reverse surface of all COLORBOND® Metallic steel with an arrow to indicate the direction of painting.

However, when fabricating architectural panels the arrow indicating direction of painting is no longer visible. Care should be taken to ensure that a suitable system exists to convey this information to the installer.

Caution must also be taken during installation to ensure that adjacent panels fit flush and flat relative to one another. Failure to do so will again result in appearance variations.

"Touching up" minor surface scratches on COLORBOND® Metallic steel is not recommended, refer to:

Technical Bulletin TB-38

Effect of touch-up paint

Minor scratching will not affect the

Minor scratching will not affect the life of the product and is rarely obvious to the casual observer. If the surface scratching is severe the material should be replaced.

ACCESSORIES

It should be noted that any accessories, such as gutter clips, which are not made from COLORBOND® Metallic steel, will be subject to a metameric effect and as a result are likely to be different in appearance. This is due to the differences in paint chemistry and method of paint application between COLORBOND®

Metallic steel and post-painted or powder coated accessory items.

SUMMARY

- Order all material for one project at the same time.
- Install panels according to painting direction and ensure they fit flush and flat relative to one another.
- 3. Do not mix material produced from different paintline runs.
- Be aware of the unique visual effects on rollformed sections and horizontal versus vertical exposure.

RELATED BLUESCOPE TECHNICAL BULLETINS

Technical Bulletin TB-38
Effect of touch-up paint

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