Site storage of cladding materials

by Dennis White, Director, SAMCRA

The consequences of not protecting galvanized coated materials stored on construction sites is relatively well known to roofing contractors and to a lesser degree builders. However, there appears to be a distinct lack of knowledge pertaining to other materials such as 55% Aluminium/Zinc (Zincalume, ZINCAL), colour-coated material, aluminium, stainless steel, polycarbonate and GRP (fiberglass). The ingress of moisture between closely packed components manufactured from these materials has a detrimental effect on both their appearance and durability. Damage can occur within 24 hours.

Initially the clear organic coating applied to 55% aluminium/zinc will protect the metallic coating. If the components remain wet this coating will soften, adopt a milky appearance and become permeable. This results in the formation of wet storage staining followed by corrosion of the steel substrate. Colour coated material will react in a similar manner. The backing coat is only a nominal 5 micron thick.

Aluminium components, including those that have been anodized, are equally prone to damage. Items wrapped in plastic are particularly vulnerable.

The interpretation of what constitutes protection is as varied as the colours in a rainbow and mostly inadequate. What is important is that the components are stored (preferably inclined) above a dry surface, kept constantly dry and exposed to free flowing air. It is of paramount importance that components exposed to moisture are separated, dried and exposed to free flowing air as soon as possible.

Bundles tightly wrapped with waterproof materials are particularly vulnerable. Where the covers are draped over the packed items and anchored to the supporting surface, they sweat in the heat of the day. On cooling, the moisture condenses and is drawn between the tightly packed components via capillary action. Where the stacking surface is likely to be exposed to occasional rainwater runoff, the gap between the stacking surface and underside of components should not be less than 200mm. This will enable any condensate to be removed by the free flowing air. Under no circumstances are cladding components to be stored on ground with standing water or subject to ponding. Dunnage used to support the bundles needs to be dry as moisture and sap trapped at the interface will attack the surface of the components. Dunnage should be spaced at not more than 2.0/3.0m centres (depending on bundle mass) and in between individual stacked bundles in such a manner that the load is transferred without damage to the components.

The splayed upstanding ends of bullnosed cladding are probably the most susceptible to storage damage. It is common practice to cover these ends with sealed black plastic which results in the accumulation of condensate at the bottom of the curve.

Moisture is not the only reason to protect cladding materials. The accumulation of dust, debris and other building materials such as mortar etc. can damage the surface. In order to avoid mechanical damage, cladding needs to be stored out of the way of other trades and traffic.

SAMCRA
SOUTHERN AFRICAN METAL CLADDING AND ROOFING ASSOCIATION

www.samcra.co.za

"The interpretation of what constitutes protection is as varied as the colours in a rainbow and mostly inadequate. What is important is that the components are stored (preferably inclined) above a dry surface, kept constantly dry and exposed to free flowing air."