

# Technical Bulletin #4

## DISSIMILAR METALS

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### **Accessory Materials Compatibility**

Contact between or run-off from Copper, lead, graphite and unprotected steel should not be used in contact with Galvalume® steel. Galvalume® steel should not be used in direct contact with wet and/or weather-treated wood or uncured concrete.

### **Flashing**

Due to galvanic action, lead and copper flashing can cause accelerated corrosion of pre-painted Galvalume® steel. Lead flashing is incompatible with Galvalume® steel. Copper flashing is incompatible with both galvanized and Galvalume® steel. For metal flashing, the preferred alternatives are bare and pre-painted Galvalume® and aluminum sheet. Graphite-free rubber and aluminum factory-made roof penetration flashings, such as those for vent pipes, should be used with pre-painted Galvalume® panels.

### **Field Cutting**

When possible, cutting of sheets at the job site should be minimized by using factory-supplied cut-to-length sheets. If installation kit cutters or a guillotine is required, using straight blade shears, profile shears, nibblers or hand snips can cut panels. It is important that all jobsite cutting practices give a clean-cut edge without damaging the paint or metal coating. The shear blades should be kept sharp to minimize burrs. Shearing of pre-painted steel sheets should be done with the critical (exposed) uppermost surface so that any small burrs are on the unexposed side. Never perform field cutting over the top of other painted products. Cutting with an abrasive disc or hacksaw or burning through with oxyacetylene or similar torches is not acceptable as it will damage the paint, metal coating and steel substrate.

### **Insulation**

Fiberglass blanket insulation with a vinyl vapor barrier is generally used on walls and under roofs on buildings with pre-painted Galvalume® roofing and siding. Under circumstances in which insulation contacting pre-painted Galvalume® panels gets wet, inside-out corrosion can occur on the panels. Insulation not properly tucked in under the roof and at the top of the wall panels can be exposed to condensation and wind-blown rain, causing underside corrosion of the roof panel.

Installation practices that allow the insulation to become continually wet should be avoided. Fiberglass blanket insulation under Galvalume® roofs needs to be installed in such a way that all vapor barrier seams are sealed, and punctures, penetrations or holes in the vapor barrier are repaired. Condensation of water vapor on the underside of the roof, along with saturation of the insulation, can cause inside-out corrosion. Certain types of field-applied spray-on insulation contain chemical fire retardants that may be corrosive to Galvalume® sheet. Check with insulation manufacturers before using such products.

## Fasteners

Because Galvalume® steel roofing and siding are long-lasting products, it is important that fasteners have a service life equivalent to that of Galvalume® panels and accessories. Fastener costs are minimal relative to the overall cost of a building project, so no benefit is gained by using inferior fasteners. The correct selection of a fastener is important for long-term structural performance and aesthetics. A wide range of fasteners is available for use with pre-painted Galvalume® steel. These fasteners are also supplied in various metals to suit the fastening requirements.

Fastener materials include carbon steel, 400- and 300-series stainless steel and aluminum. Carbon steel fasteners are available with special heads that include cast zinc-aluminum, nylon and 300-series stainless capped heads. For all fastening applications, users should be guided by recommendations of the fastener and panel manufacturer.

For a detailed list of fasteners that meet the above specifications contact your representative.

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