

TL-0007 — Use Under Architectural Metal Roofing Technical Letter

GRACE ICE & WATER SHIELD[®], GRACE ICE & WATER SHIELD[®] HT, GRACE ULTRA[™], GRACE SELECT[™], Roof Detail Membrane[™], TRI-FLEX[®] and TRI-FLEX[®] 15 are recommended for use under architectural metal roofs of all colors and compositions. GCP granular underlayment is a granular surfaced membrane and should not be used without consulting the metal roofing manufacturer or your GCP sales representative. The membrane should be applied directly to a clean, dry, continuous structural deck. Some suitable deck materials include plywood, wood composition, wood plank, metal, concrete, or gypsum sheathing. Decks shall have no voids, damaged, or unsupported areas. Repair deck areas before installing membrane. Mechanically fastened rigid insulation may be applied over the self-adhered membranes. All types of rigid insulation boards are acceptable for use in this manner. Rigid insulation should not be hot mopped onto the membrane.

Use Under Copper, Cor-Ten[®] and Zinc Metal Roofing

Copper, Cor-Ten[®] and zinc metal roofing have inherent properties that cause roofs constructed with these materials to become much hotter than other roofs. These metals absorb most of the energy reaching them from the sun (high thermal absorption), reflect little energy (low reflectivity), and conduct heat very rapidly (high thermal conductivity). Therefore, there are special design considerations for underlayments used under these metal roofs, due to the high in-service temperatures that these roof assemblies can reach. GRACE[®] ULTRA is recommended for use under copper, Cor-Ten[®] and zinc in high altitude climates. GRACE[®] ULTRA is formulated with 100% butyl adhesive and is designed to withstand even the highest in-service roof temperatures. This membrane provides the highest factor of safety in high temperature roof applications. Check with your GCP technical sales representative for assistance in selecting the best product for your application. In addition to the high temperature on zinc roofs, the designer should also be aware that an air space is needed between the GCP underlayment and the zinc roof to prevent corrosion of the zinc.

Welded Architectural Metal Seams

Some architectural metal roofing systems require that the seams between panels be welded. If the architectural metal is applied directly over the membrane it is possible that the heat from the welding operation could cause damage. The GCP underlayment should be adequately protected from the heat of the welding process. What constitutes protection will depend on the type of metal, the type of torch, and the seam system being used. In some cases, contractors have found that two layers of #15 roofing felt, placed only in the metal seam area, offered sufficient thermal protection from a welding operation.

Non-Compatible Materials

GCP's underlayments are not compatible with the following substances:

- Creosote
- Diesel Fuel
- Gasoline/Oil
- Hydrocarbon Solvents

- Pentachlorophenol
- Polysulfides
- EPDM*
- Flexible (plasticized) Polyvinyl Chloride (PVC)*
- Uncured Neoprene*
- TPO*

For compatibilities of other substances and products not listed above or if there is a need to further investigate, please consult your local GCP technical sales representative.

* Note: EPDM, flexible (plasticized) polyvinyl chloride—PVC, uncured neoprene and TPO are not compatible with rubberized asphalt. GRACE[®] ICE & WATER SHIELD, GRACE[®] ICE & WATER SHIELD HT, GRACE[®] Select, GCP granular underlayment, and Roof Detail Membrane are manufactured with a rubberized asphalt adhesive and should not be applied directly to these materials. A barrier such as 0.040 inch to 0.060 inch (1.0 mm to 1.5 mm) flat sheet metal is required to keep the material separated. Only GRACE[®] ULTRA may be applied directly to EPDM and TPO.

North America customer service: 1-877-4AD-MIX (1-877-423-6491)

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