

## HANDLING & STORAGE

Correct handling of rainwater disposal products is critical to ensure damage does not occur during transportation and storage of the material. The following comments are made as guidelines to use when inspecting Dimond rainwater disposal systems during the installation process.

Visual inspection of materials when they are delivered to the site should be carried out to ensure they are in a dry condition, free from damage and are the correct material grade for the environment they are being installed in.

All components stored on site must be kept dry. Site storage should be out of direct sunlight and if outside, must be protected by covers that remain clear of the material surface at all times. The strippable film that is applied to prepainted rainwater disposal product should be removed within half a day of delivery to site and when exposed to sunlight must be removed immediately upon gutter installation. Otherwise glue residue will be left on the gutter surface.

The need to keep the products dry applies to all metal types. If aluminium is stored wet it will suffer black staining that detracts from appearance. If prepainted ZINCALUME™ or MagnaFlow™ products are stored wet, the paint finish will blister due to moisture absorption and eventual under-film corrosion. If unpainted ZINCALUME™ products are stored wet the surface will stain and can suffer loss of protection that will show up in time as premature corrosion.

## LAYOUT & FASTENING

The following comments are made as guidelines to use when inspecting Dimond rainwater disposal systems during and after installation.

The gutter will be delivered to site in custom run lengths up to 6 metres maximum.

Brackets shall be fixed to the outside face of the fascia panel at specified centres to a line to provide sufficient fall to the outlet position to avoid ponding in the gutter. To achieve this, a minimum fall of 1:500 is recommended. The levelness of the structure shall not be relied upon to determine fall. String lines or laser lines are recommended.

Any exposed metal foot on the brackets should be protected with a suitable paint system.

Fixings can be screws or nails depending on the substrate and gutter size, and shall have a durability equal to or better than the anticipated durability of the bracket or gutter making sure the materials are compatible. Large gutter sizes above Box 125 will require fixings to also resist wind uplift loads.

Where possible, gutter runs shall be continuous from corner to corner within the 6 metre standard length limitation. Laps shall be formed to suit water flow direction and where possible away from the line of sight. All laps shall be positioned away from doorways and access ways. All laps must be sealed and rivetted with no sealant build-up on the inside lap edge. For gutters supported by external brackets, it is good practice to position laps such that they are covered by a gutter bracket.

Internal brackets should be positioned and fixed under roof profile rib and not the pan or trough, to allow unobstructed discharge into the gutter.

Stop ends shall be formed wherever gutter runs are terminated, except where the termination occurs at a rainhead.

Placement of downpipes must be to suit the roof catchment area for the flow capacity of that gutter size. Droppers must be positioned at the lowest point of the gutter run.

There should always be an overflow outlet provided as a secondary means to allow water to discharge to the building outside, should a blockage occur or in heavy rainfall conditions beyond the scope of design. This must eliminate water from the gutter entering the building. Overflows cross sectional area should be at least the same cross-section area as the primary outlet size.

## GENERAL WORKMANSHIP

The following comments are made as guidelines for designers to use when inspecting Dimond rainwater disposal systems during and after installation.

### Dissimilar Materials

Care should be taken to ensure that incompatible materials have not been used. Where necessary, water run-off from dissimilar materials should be contained and discharged using compatible materials.

### Drilling and Cutting

Where gutter lengths require cutting, only shears, powered nibblers or hand shears should be used to leave a cleanly cut edge.

Any drilling should be carried out well clear of other lengths of gutter. All drilling swarf should be removed from the surface of the gutter immediately.

### Ponding

Gutters shall be laid with a positive fall to the outlet to avoid ponding. Any ponding that occurs should drain or dry away within hours otherwise it may affect any material warranty.

### General Appearance

Laps shall be formed to avoid the water flow entering them and where possible to suit the line of sight.

### Sealants

Only neutral cure silicone sealants should be used.

Where outlets (droppers) are fitted to the sole of the gutter, sealant must not restrict the flow of water to the downpipe or hold unnecessary dirt.

All sealed joints must be mechanically fastened, and excessive sealant removed to prevent unnecessary dirt build-up.

### Strippable Film

Protective films must be removed immediately upon product installation. Prolonged UV exposure will make removal difficult.

The film must be removed from laps and difficult to access areas prior to final fixing in place. Strippable film must not remain in direct sunlight for more than half a day.

### Scratches and Touch-up

Scratches that have not penetrated to the base metal (on prepainted material) and minor surface abrasions should be left alone, as touch-up painting will become obvious in time.

Any product with heavy scratch damage (e.g. scratches readily visible from a 3-4 metre distance and that exposes the base metal) should be replaced.

### Copper Joints

These can either be Silfosed together or use copper rivets and sealant. Care must be taken to get rid of any spirits of salts by washing the joint thoroughly. Providing for expansion and contraction should be allowed for as detailed in the MRM Metal & Roofing Code of Practice.