

REACTIONS OF GALVANISED STEEL & ZINC WITH WOOD

Some wood cannot be used with our galvanised steel and zinc rainwater goods because they contain a high volume of acid.

We do not recommend use in combination with:

- Douglas Fir
- Oak
- Chestnut
- Larch
- Red cedar
- Cedar



Materials such as cedar or birch cladding contain volatile alcohols, and oils that have a solvent action on some protective coatings applied to metal - iron and uncoated steel are much more susceptible to the corrosive influence of these woods than aluminium, copper or brass, for example.

Galvanic Corrosion is an electrochemical process which occurs when dissimilar metals are in contact with each other in the presence of an electrolyte - rain water and salt water make especially good electrolytes. Using metals close together on the scale reduces the prevalence of bimetallic corrosion.

Aluminium rainwater systems should not be used with copper roofing. When rainwater from the roof makes contact with the uninsulated aluminium the risk for galvanic corrosion to occur is high because of the copper ions in the water. The closer the galvanic potentials are, the less corrosion that will occur.

The size of the surface area in contact make a difference to the risk of corrosion. A thick layer of paint or a rubber washer in between can reduce the risk.

Metal Rainwater Systems Galvanic Scale

Electropositive/Anodic End

Zinc

Aluminium

Galvanised Steel

Cadmium (plated fixings)

Cast Iron

Stainless Steel (active) fixings

Lead

Brass, Bronze fixings

Copper

Stainless Steel (passive) fixings

(chromium-rich surface + sufficient oxygen available for self repair i.e. flowing, not stagnant water)

Electronegative/Cathodic End

More Noble