



## Additional Heat Exchanger Corrosion Resistance

Daikin use an anti-corrosion treatment on all our outdoor heat exchangers and pass both the VDA Wechselstest and Kesternich Test to give up to 6 times more resistance to corrosion compared with standard.

However, corrosion will occur faster in high humidity areas when heat exchangers are exposed to high airborne levels of electrolytes such as:

- › Sodium chloride (salt)
- › Ammonium sulphate (commonly used as soil fertiliser)
- › Sulphur dioxide (produced by industrial processes or by burning fossil fuels)

### Daikin's solution

Daikin UK can offer an additional anti corrosion treatment by coating the coils with a Blygold treatment to add an additional level of protection to offer peace of mind to your customers in areas such as:

- › Coastal areas due to the high salt and humidity levels (Normally up to 5km inland in the UK)

- › Near agricultural spaces where fertiliser spray is used.
- › In areas with high traffic pollution or near industrial buildings that burn fossil fuels

## Benefits of Blygold treatment

- › Prolong the life of the heat exchanger by up to 3x
- › Maintain the efficiency of the heat exchanger throughout its life

### Applicable units

Blygold treatments are available for all condenser types:  
Direct Expansion products starting with RE RY RX RQ RZQ \*MX  
Heating products starting with ER ED EB EV  
Refrigeration products starting with LR LC  
Applied Air cooled Chiller products starting with EW

Please contact your local Daikin representative for more details.

## Coating specification – BLYGOLD®



Blygold PoluAl is an anti-corrosion treatment consisting of a conversion layer followed by a polyurethane top coat. The operating temperature range is from -20°C to 150°C. The Blygold treatment can be applied to cooling and DX coils.

Blygold Coatings shall ensure that Daikin condensing unit coils are sealed off from the environment in a manner that will not reduce the heat transfer or cause a pressure drop. This will ensure greater control over cooling capacities and energy consumption, as well as extending the lifetime of the heat exchanger. The units are treated at Blygold UK's premises prior to equipment being shipped to site.

The Blygold Polyurethane coating is impregnated with a metallic pigment to prevent loss of heat conductivity. The coating shall not block the fin perforations and is repairable and maintainable on site. The Coating is UV resistant, flexible, heat conductive, and chemical resistant to most harsh environments.

### Protection against corrosion

This is achieved by means of a high pressure spray technique that ensures full penetration but prevents bridging (thus preventing capacity loss).

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Copper elbows (returns), headers and brazing parts can be pre-treated with a special Polyurethane primer to ensure maximal adhesion and protection to these areas.

### Quality level

Quality level of the treatment will meet the following requirements : Appearance Level : The penetration of the coil has to be 100%, to be established and proven by the application method and visual inspection.

### Adhesion Level

The adhesion level will meet Cross hatch test level 0 (European) and 5B (USA) according to ASTM 3359-83 53151 method B-A

### Thickness Level

The thickness level will be 1 mil (25 µm) plus or minus 20 %.

### Corrosion Resistance Level

ASTM-B117 (DIN 53167) 4000 hours (Conditions: Salt concentration 5 % NaCl pH 6,5 - 7,2 Temperature 37°C (98.5°F) ) ASTM-B287 (DIN 50021) 4000 hours (Conditions: Salt concentration 5 % NaCl pH 3,2 by Acetic Acid (HAC)).

