AA Aqua Aero
Technical data sheet
AA Aqua Aero

PROTECTION AND ENERGY SAVING FOR MICROCHANNEL HEAT EXCHANGERS

Maintaining the initial thermal capacity
Extremely high resistance to corrosion
Re-applicable also on the installation site

The AiAX AA Aqua Aero anticorrosion protection is a special water based coat, composed of new high chemical resistance resins, applicable by flooding or spraying method. The technical features and the tested and certified quality of the AiAX AA Aqua Aero product guarantee the protection of the finned pack coils in the most aggressive environments and in the most particular applications.

The product is, in fact, flexible to resist to thermal contractions and expansions, UV resistant, dirt repellent, mechanically resistant and with limited heat transmission losses (around 2%). Practically no effects on air side pressure drop.

The treatment is guaranteed for 3 years (in Italy) against corrosion provided a normal maintenance is carried out.

The AiAX AA Aqua Aero treatment consists in a series of operations which can be summarized as follows:

- Coil washing and degreasing;
- drying of the coil by hot air ventilation;
- Application of an aluminium conversion layer;
- protection of the brazing points between the microchannels and headers by spraying the AiAX Mastic Primer AA;
- application of the product AiAX AA Aqua Aero by spraying from one side of the coil for a complete heat exchange surface penetration;
- final touch-up by spraying from both sides for a double protection of the fin edge (critical point of corrosion attack).

Time of curing

The curing time of the protection is of about 30 minutes (touch dry) with a thickness on the fin edge of about 25μm. No smell coming from solvents as the product is water based.
Possibility of automation of the AiAX AA Aqua Aero application method

The AiAX AA Aqua Aero application method that we have just described offers the possibility of being easily automated as much as necessary, depending on the number of coils to be treated per unit of time. It is an ideal procedure for microchannel coil manufacturers which wish to offer to their customers the coils already protected against corrosion. The system is economically more competitive if compared to complicated dipping processes followed by an oven curing. The product is ecologically simpler to handle as it is water based. It offers the very distinctive feature to be re-applicable many times with simple maintenance operations, extending the limit of the warranty period (if there is a regular and certified maintenance program).

Field of application and operational limits

The AiAX AA Aqua Aero product resists practically in all ambient situations, from marine to rural ambient, from industrial areas to urban zones. The treatment corrosion resistance depends from the concentration of vapours/polluting agents in the installation site. If the concentration limits are exceeded the warranty is no longer valid. The chemical resistance list can be downloaded from the site: [www.aiaxcoatings.com](http://www.aiaxcoatings.com). The field of temperatures of applicability of the AiAX AA Aqua Aero product is from -40°C to +120°C.

The AiAX AA Aqua Aero treatment has a high corrosion resistance. To reach correct valuations various test have been carried out and the relative Test Reports are available as per the enclosed table.

<table>
<thead>
<tr>
<th>Marine ambient</th>
<th>Urban ambient</th>
<th>Industrial ambient</th>
<th>UV resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM B117</td>
<td>ASTM G85</td>
<td>DIN 50018</td>
<td></td>
</tr>
<tr>
<td>ASTM D 4587/4141</td>
<td>ISO 11341/11507</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>