



A Family Business
Since 1972

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Rytons Rytweep® A1 Metal Corrosion Statement

Composition:

Rytons RYTWEA1METAL - Rytweep® A1 Metal (Fire-rated Cavity Weep) is diecast in ZL5, a high grade zinc alloy. After diecasting, the component undertakes a secondary two-part electroplating process, ending with Tripass ELV TECBLUE, for a high corrosion performance. Read more about ZL5 and electroplating [here](#).

Corrosion:

All metals will eventually corrode. Some, like pure iron, corrode quickly. Others, such as stainless steel, corrode slower due to a combination of iron and other alloys. The rate at which metal will corrode is mainly dependent on the environmental conditions to which it is exposed.

Zinc has a high resistance to corrosion in a variety of environments owing to aluminium in the alloys. It is used extensively in the construction industry for diecasting products and coating (galvanizing) iron and steel. Over time it is likely that the Rytweep® A1 Metal will oxidise, however, we do not believe this patina will impede the performance of the Rytweep® as an effective cavity weep hole duct.

Galvanic Corrosion:

Galvanic corrosion (also called bimetallic corrosion, dissimilar metal corrosion and contact corrosion) is an electrochemical process in which one metal corrodes preferentially when it is in electrical contact with another, in the presence of an electrolyte (e.g. water containing salt, acid, combustion product).

Tabulated data on the behaviour of bimetallic couples can be found in British Standard PD 6484:1979. Below is an extract from table 23 relating to zinc paired with stainless steel.

| Table 23 - Additional corrosion of zinc resulting from contact with stainless steel | | | |
|--|--------------------------------|-------------------------|---------------|
| | Atmospheric Environment | | |
| Metal in Contact | Rural | Industrial/Urban | Marine |
| Stainless steel (austenitic and other grades containing approximately 18% chromium) | 0 to 1 | 0 to 1 | 0 to 1 |
| Stainless steel (austenitic and other grades containing approximately 13% chromium) | 0 to 1 | 0 to 1 | 0 to 1 |

Key:

- 0: Zinc and zinc base alloys will suffer either no additional corrosion, or at the most only very slight additional corrosion, usually tolerable in service.
- 1: Zinc and zinc base alloys will suffer slight or moderate additional corrosion which may be tolerable in some circumstances.

Note:

- This data in the table relates to uncoated zinc.
- Rytons Rytweep® A1 Metal is further protected by the extra insulation barrier of electroplating.

All information given is in good faith and to the best of our knowledge is true and accurate, however, no guarantee regarding its accuracy is given, nor should Rytons representatives or agents imply any such guarantee. Customers should satisfy themselves that the products are suitable for the intended purpose.