# DISCOLOURATION OF GALVANISED SURFACE

Revision 4

At GM Poles, our steel products are hot dip galvanised after fabrication to ensure long-lasting corrosion resistance. This globally recognised method forms a robust zinc coating that shields steel in even the harshest environments.

## INDUSTRIAL VS ARCHITECTURAL EXPECTATIONS

Hot dip galvanising is engineered for industrial-grade performance, not architectural aesthetics. While the coating may vary in appearance, its protective qualities remain consistent and reliable.

## SURFACE APPEARANCE & AGEING

Initially, galvanised steel typically appears bright and uniform. Over time, usually within 1 to 5 years, it naturally weathers to a matte grey finish. This transformation is purely cosmetic and does not affect the coating's protective performance.

## PERFORMANCE GUARANTEE

GM Poles guarantees the corrosion resistance of our galvanised coatings in accordance with AS/NZS 4680. For full details, refer to our Warranty and Maintenance documentation.

## MATERIAL SELECTION & STANDARDS

We source steel complying to various Australian Standards (AS 1163, 1594, 3678, 3679) as appropriate and follow best-practice guidelines for design from the Galvanizers Association of Australia (GAA) and our galvanising partner. This ensures consistent coating quality and longevity.

## SERVICE LIFE & DESIGN CONSIDERATIONS

The service life of galvanised steel is influenced by coating thickness, which correlates with the base steel thickness and environmental exposure. If specific service life or design considerations are a product or project constraint, please outline your requirements to GM Poles and our technical team will advise what can be achieved.

**MINIMUM REQUIRED COATING THICKNESS AND MASS ON HOT DIP GALVANISED STEEL TO AS/NZS 4680**

| Steel Thickness (mm) | Minimum average coating thickness (µm) | Average coating mass minimum (g/m²) |
|---|---|---|
| > 6 | 85 | 600 |
| > 3 to ≥ 6 | 70 | 500 |
| ≥ 1.5 to ≤ 3 | 55 | 390 |
| <1.5 | 45 | 320 |

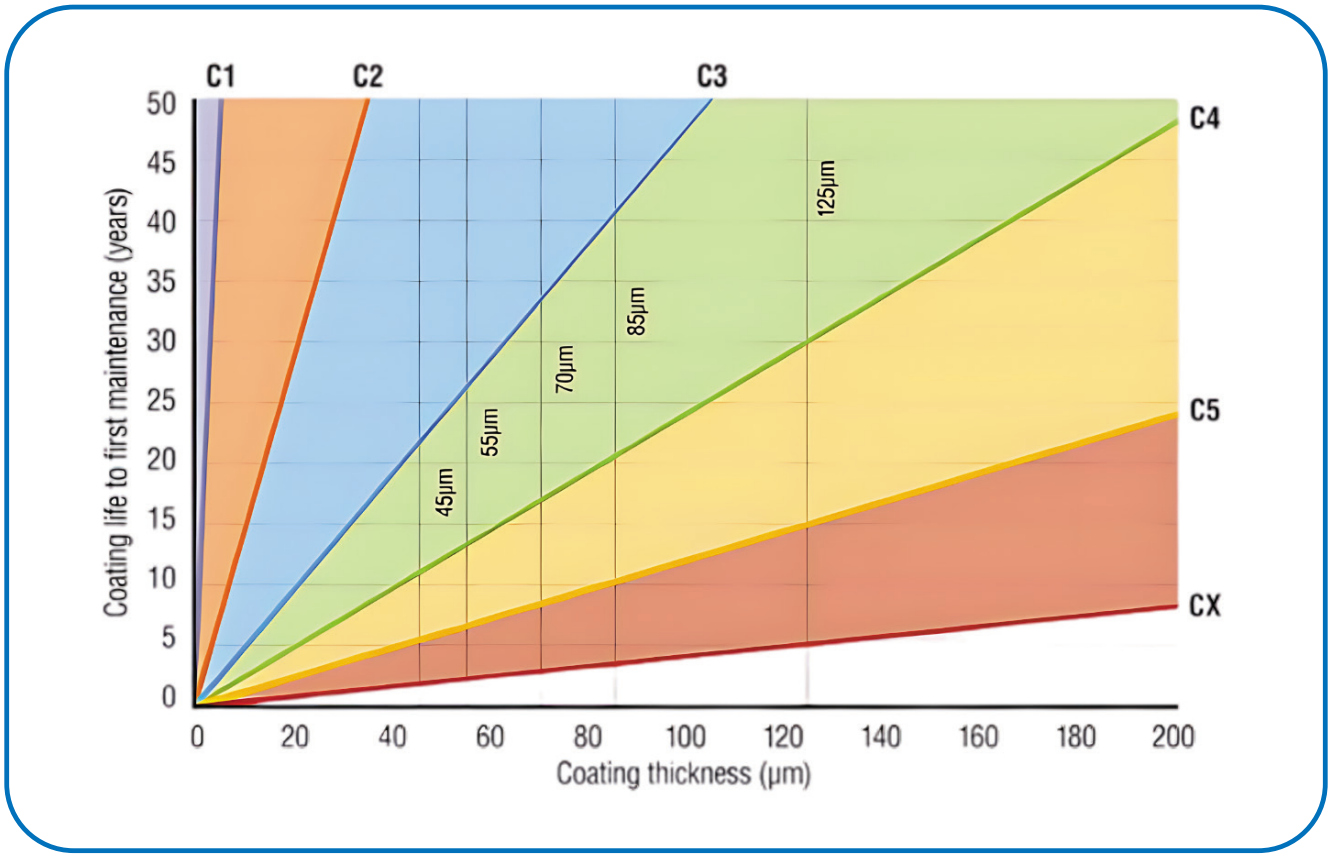
## APPEARANCE AND MAINTENANCE GUIDELINES

GM Poles follows the Galvanizers Association of Australia (GAA) recommendations for acceptable galvanising coating appearance. Visual examples and technical details below are sourced directly from GAA.

| | | |
|---|---|---|
| **Dull Grey Coating** |  | *Acceptable* . Can be localised or over the entire product. Usually thicker coating than a shiny coating and rarely possible to be 'controlled' by the supplier. |
| **General rouchness** and thick coatings on welds |  | *Acceptable unless otherwise agreed* . Usually thicker coating and therefore provide for a longer protective life. If this is unacceptable, discuss with us prior to order. It is impossible to improve after galvanising. |
| **Lumpiness and runs** |  | *Acceptable unless otherwise specified.* Lumps and runs are not detrimental to coating life. If this is undesirable, additional costs may be involved to avoid it (if avoidance is possible). |

Clients are encouraged to routinely inspect galvanised products throughout their service life and perform maintenance as needed. Please refer to the GM Poles Maintenance Instructions for guidance.

Over time, coating thickness will naturally diminish and may require attention. The location of the installed product significantly affects its service life, as defined by the corrosivity categories outlined in AS 4312. A general guide to "life to first maintenance" is available below, with supporting visuals and data from GAA.




For example, steel with a thickness of 6 mm will typically have a minimum galvanising coating of 85 µm. If installed in a C4 environment (such as a calm sea-shore), you can follow the 85 µm marker upward on the GAA chart. Upon reaching the green C4 line, trace the intersection across to the left axis to determine the expected service life. In a worst-case scenario, this indicates approximately 20 years to first maintenance, and in a best-case scenario, if the marker intersects the next zone, it may extend up to 40 years.

GM Poles will make every effort to accommodate your specific project requirements. Otherwise, you can be confident that we have applied due diligence in engineering a product that is fit for purpose and aligned with industry best practice.

If you would like to discuss any aspect of this document further, please contact our office and ask to speak with **Technical Sales Support**.