

Galvanizing thickness on hollow sections and open profiles

Since the introduction of thin in-line zinc galvanized hollow and open profiles, there has been confusion among designers concerning what zinc thickness is being offered. This can lead to incorrect choice, and subsequent failure.

In 1999 the Australian specification for all hot dipped galvanizing AS1650 was deleted and replaced with several specifications covering the various grades and types of galvanizing now available.

The product which has been known for many years as "general galvanizing", "after fabrication galvanizing", or "batch galvanizing" is now covered separately in AS/NZS 4680:1999, and is the only product which offers the maximum corrosion protection and abrasion resistance.

This new primary Standard reflects the International Standard ISO 1461 which is to apply throughout the industrial world.

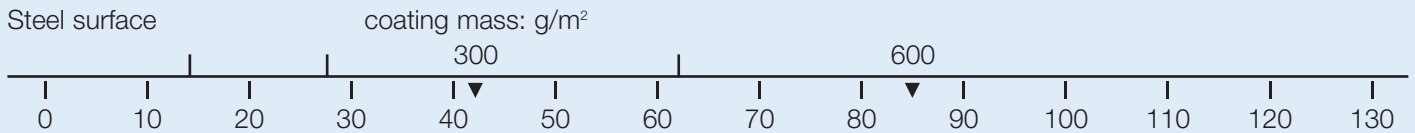
The bar chart below details the readily available hollow and open profiles which have zinc coatings of various thicknesses. As can be seen from the bar chart the thickness of the zinc coatings varies a great deal and can go down to as low as 7 µm.

In this context it is important to note that service life is proportional to galvanizing thickness in any given environment.

If you have any questions regarding the chart please do not hesitate to contact the GAA.

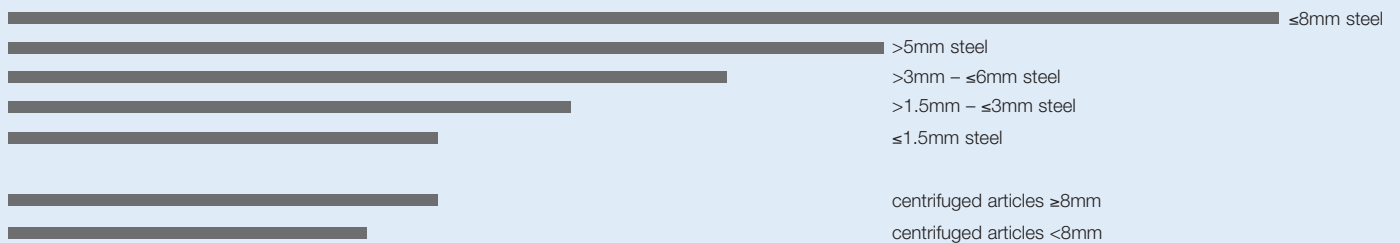
Bar chart illustrating the entire range of readily available galvanized coatings currently in Australia.

Zinc coating on steel: $1\text{g/m}^2 = 0.14\mu\text{m}$



Average minimum coating thickness: microns from steel surface

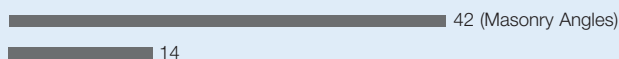
AS/NZS 4680:1999 – Hot-dip galvanized fabricated articles, identical coatings as in BS EN ISO 1461:1999



AS/NZS 4792:1999 – Galvanized hollow sections

- Both surfaces - Hot dipped Galvanized CHS
42
- External surface only – CHS, RHS
18
14
- Manufactured from welded pre-galvanized strip – CHS, RHS
14

AS/NZS 4791:1999 – In-line galvanized open sections



AS 4750 (Int) – 2000 Electrogalvanized (zinc) coatings on ferrous hollow sections – CHS, RHS



galvanizers
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We provide information, publications, films and assistance on all aspects of design, performance and applications of hot dip galvanizing.
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