



# Queensland Government

## Reaffirms Hot Dip Galvanizing for Threaded Fasteners in all Timber Framed Residential Construction

The Queensland Building and Construction Commission (QBCC) Technical Article, *Concern over conformity of threaded cyclone rods*, dated October 2016, reaffirms that hot dip galvanized fasteners, plated to the Australian Standard AS NZS 1214-2016, are the minimum corrosion protection coating approved for residential timber-frames construction in Queensland.

The QBCC Technical Article reaffirms the Australian Standard AS 1684 Series *Residential timber-framed construction*—in Cyclonic and Non-cyclonic areas—applies.

This Australian Standard AS 1684 references the following two Australian Standards for coating steel components:

- AS 1397 *Steel sheet and strip – Hot-dip zinc coated or aluminium/zinc coated*; and
- AS NZS 1214-2016 *Hot-dip galvanized coatings on threaded fasteners*

The QBCC Article writes “AS1684 *Timber Framing Code* includes a requirement that all metal straps, framing anchors and similar structural connections have a minimum corrosion protection of Z275, or in layman’s terms, 275 grams weight of zinc coating per square metre of surface area.” AS1397 states that coating class designation Z275 is approximate coating thickness 40µm. All fasteners galvanized to AS NZS 1214-2016, including Hobson Allthread ASMSGCM series, comply with the minimum corrosion protection requirements of Z275.

AS NZS 1214-2016 is a process-based Standard. It describes how to satisfactorily coat threaded fasteners with a minimum hot-dip galvanized coating of 40 µm in any location and a minimum average of 50µm.

AS 1684 Clause 1.4.5 *Durability* reminds Builders and Certifiers that “*The structural design criteria have been developed on the assumption that materials used and their installation and maintenance ensure that components will fulfil their intended structural function for the intended life of the structure.*” The Standard notes that “*In the selection of materials, specific consideration should be given to the risk of and resistance to biological attack and corrosion ... taking into account the short-term and long-term conditions of exposure.*”

Given this reference to *Durability* in AS 1684, Hobson Engineering wishes to remind Builders and Certifiers that 300 series austenitic stainless steels may be more suitable in marine affected coastal locations.

AS1684 Clause 1.15 states, “*Where other types of corrosion protection are provided, they shall satisfy the requirements of the relevant authority.*”

In Queensland, the relevant authority is the Queensland Building and Construction Commission (QBCC). Builders and Certifiers offered fasteners not hot-dip galvanized to AS NZS 1214-2016 or manufactured from 300 series austenitic stainless steel should ask to sight evidence of approval from the Commission.

**Hobson Engineering is always available to provide information that will help you in asking the right questions from your building assessor.**