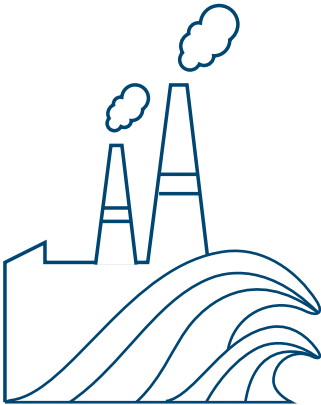


Corrosion Protection of Boxspan Beams



WHY IS STEEL COATED?

Light gauge steel used in building structures is coated to protect it from corrosion. This is good practice, and is a requirement of the National Construction Code (NCC) Volume 2, for Class 1 & 10 buildings. The amount of protection required is determined by the application of the product, the location of the product within the structure and the proximity of the structure to corrosive environments.

The NCC is concerned with corrosive environments caused by salt spray from breaking surf and airborne residue from heavy industrial areas, stipulating minimum distances from those environments for acceptable performance of standard metallic coatings. Where the steel member is outside the building envelope (see below for explanation) the product should be maintained periodically. Where greater protection is required, it can be achieved by thicker metallic coatings or by painting over the coating with a zinc rich or other suitable paint system.

WHAT ARE OUR COATINGS?

Zinc, or an alloy of zinc and aluminium, are the most common protective coatings used on light gauge steel. Spantec Boxspan[®] beams are manufactured from metallic coated steel complying with Australian Standard AS 1397 G550 Z275 or Z600. The specifications Z275 and Z600 refer to the zinc coating, measured in grams of zinc or aluminium/zinc per square metre. This measurement is the total coating mass on both sides of the steel.

	BOXSPAN BEAMS	BRACKETS	POSTS & BRACING SHS	PIER HEADS & BASES	BRACING CONNECTIONS
STANDARD COATING GALVANIZED STEEL	Z275 is 275 grams of zinc per m2 = 137.5 grams on the inside and outside of beams.	Brackets are rolled from sheet metal with the zinc coating of Z275. (275g/m2 in (275 grams of	Z270 (50g/m2 per side	Hot dip galvanized steel to HDG 450	Hot dip galvanized steel to HDG 450
EXTRA COATING (CODE = XTRA) HIGHER CORROSION PROTECTION	Z600 is 600 of zinc per m2 = 300 grams on the inside and outside of beams.	Hot dipped galvanized (to a coating level of 600g/m2) brackets are also available for xing Boxspan with higher zinc coating.	MAXI-TUBE [®] Zinc-alloy coated steel ZM275 (137.5g/m2 per side) Equivalent to Hot dip galvanizing HDG 500	Hot dip galvanized steel to HDG 450	Hot dip galvanized steel to HDG 450

Note • MAXI-TUBE[®] is an Orrcon steel product. For more details [click here](#) to see MAXI-TUBE specifications.

WHERE TO USE DIFFERENT COATINGS

The National Construction Code (NCC) Volume 2 sets out the following requirements for coatings of steel frame products:

	AREA 1 Within building envelope	AREA 2 Outside building envelope	AREA 3
Location:	More than 300 metres from breaking surf; or	More than 1 kilometre from still water; or	Where 1 & 2 do not apply
	Not in a heavy industrial area	More than 10 kilometres from coast with breaking surf; or	
		Not in a heavy industrial area	
COATING	Minimum Z275 or AZ150	Minimum Z275 or AZ150	More than Z275 or AZ150

Note: The building envelope is deemed to be a space in the building where the steel frame does not have direct contact with the external atmosphere, other than for normal ventilation purposes. Areas not within the building envelope include floor framing members where there is no continuous perimeter subfloor walling or verandah roof framing members with no ceiling lining.

CHOICE OF PRODUCTS

The builder has the responsibility for choosing the appropriate product for the location and application of the job. This information can be obtained from the National Constitution Code (NCC)

Where in doubt, the project consulting engineer should be consulted to provide a specification for the coating and any additional protection measures (if required).

MAINTENANCE

Where Boxspan® beams are used outside the building envelope in adverse environments, good maintenance practice will extend its long life.

The first maintenance check would typically involve inspecting the exposed galvanized members for evidence of corrosion. If evidence of corrosion is found, maintenance in the form of cleaning and applying proprietary paint system in accordance with the manufacturer’s recommendations will extend the life of the product.

