

Corrosion Class	Substrate	External	Internal
C1	Environment	Heated buildings with clean atmosphere	Heated buildings with clean atmosphere
	Aluminium	Chrome-free surface conversion	Chrome-free surface conversion
	Steel	Degrease or shot blast to SA 2 ½	Degrease or shot blast to SA 2 ½
C2	Environment	Unheated building, chance of condensation	Unheated building, chance of condensation
	Aluminium	Chrome-free surface conversion. 40µ	Chrome-free surface conversion. 40µ
	Steel	Degrease or shot blast to SA 2 1/2. 60µ	Degrease or shot blast to SA 2 1/2. 60µ
C3	Environment	Areas with high humidity and some air pollution	Areas with high humidity and some air pollution
	Aluminium	Chrome-free surface conversion. 60µ	Chrome-free surface conversion. 60µ
	Steel	Degrease AND Shot blast to SA 2 1/2 & zinc primer. 130µ OR galvanize 60µ	Degrease AND Shot blast to SA 2 1/2 & zinc primer. 130µ OR galvanize 60µ
C4	Environment	Chemical plants, swimming pools, coastal ship and boatyards	Chemical plants, swimming pools, coastal ship and boatyards
	Aluminium	Chrome-free surface conversion. 80µ	Chrome-free surface conversion. 80µ
	Steel	Galvanize, Chrome free surface conversion, zinc primer. 140µ	Galvanize, Chrome free surface conversion, zinc primer. 140µ
C5I	Environment	Industrial areas with almost permanent condensation and high pollution	Industrial areas with almost permanent condensation and high pollution
	Aluminium	Chrome free surface conversion. Waterproof primer. 140µ	Chrome free surface conversion. Waterproof primer. 140µ
	Steel	Galvanize, Chrome free surface conversion waterproof primer. 140µ	Galvanize, Chrome free surface conversion waterproof primer. 140µ
C5M	Environment	Galvanize, Chrome free surface conversion waterproof primer. 140µ	Galvanize, Chrome free surface conversion waterproof primer. 140µ
	Aluminium	Chrome free surface conversion. Waterproof primer. 140µ	Chrome free surface conversion. Waterproof primer. 140µ
	Steel	Galvanize, Chrome free surface conversion, waterproof primer. 160µ	Galvanize, Chrome free surface conversion, waterproof primer. 160µ

Notes

- All film thicknesses (microns - µ) are final powder coat cured film.
- This chart does NOT assign life expectancies or guarantees to any of the processes.
- It is assumed that all design and fabrication are in accordance with the relevant standard.
- All coatings must be maintained according to the manufacturer recommendations.
- Galvanizing zinc thicknesses are detailed in BS EN ISO1461.
- Coastal is defined as within 1000m of the shoreline.
- Etch rate at pre-treatment stage 1 is >2.0 gsm for C4 environment and above.
- Chrome free aluminium is Titanium Zirconium technology.
- Chrome free galvanized steel is Silane technology.
- Information based on Table1. BS EN ISO 9223:2012
- Corrosion of metals and alloys : Corrosivity of atmospheres
- Durability of coatings – life to first maintenance category L, M, H and VH as defined in BS EN ISO 12944 – 1 are not specified in this document.

Powdertech Pre-Treatment Process Stages

Aluminium

- Acid etch cleaner
- Cold mains water rinse
- De-ionised water rinse
- Chrome free conversion coating. TiZr
- De-ionised water rinse
- De-ionised water rinse

Galvanized Steel

- Acid etch
- Cold mains water rinse
- Activator
- Cold mains water rinse
- De-ionised water rinse
- Chrome free conversion coating. Silane
- De-ionised water rinse
- De-ionised water rinse