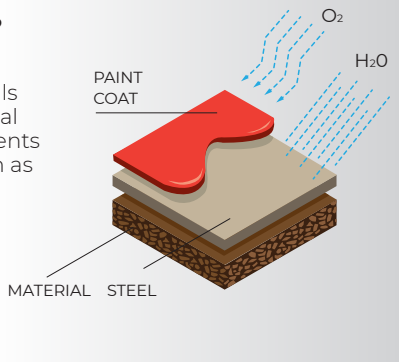


— ANTI-CORROSIVE PAINT SYSTEMS —

BASICS

What is corrosion?

Corrosion is defined as the degradation of metals due to an electrochemical process caused by elements in its environment - such as humidity and oxygen.



What is an anti-corrosion system?

The ISO 12944 is the industry standard for corrosion protection of steel structures by protective paint. It is designed to provide guidance to architects, engineers, specifiers, applicators and other parties in the application of coatings to steel. It establishes the preparation of substrates and classifies atmospheric environments into categories of corrosivity and estimated durability.

Changes to corrosion categories - ISO 12944/18

The old C5-I and C5-M categories have been replaced with C5 for harsh onshore categories and by CX for offshore categories. CX is taken care of in a new Part 9.

DURABILITY CATEGORY	PREVIOUSLY	CURRENTLY
Low (L)	2 - 5 years	Up to 7 years
Medium (M)	5 - 15 years	7-15 years
High (H)	>15 years	15-25 years
Very High (VH)	---	> 25 years

Corrosion category ISO 12944-1	Durability ranges as per ISO 12944-1	Test assessment 1 as per ISO 2812-2			Test assessment 2
		ISO 2812-2 (Hours of water immersion)	ISO 6270-1 (resistance to condensation in hours)	ISO 9227 (Salt spray test in hours)	Ageing test cycle (in hours)
C2	Low	-	48	-	-
	Medium	-	48	-	-
	High	-	120	-	-
	Very high	-	240	480	-
C3	Low	-	48	120	-
	Medium	-	120	240	-
	High	-	240	480	-
	Very high	-	480	720	-
C4	Low	-	120	240	-
	Medium	-	240	480	-
	High	-	480	720	-
	Very high	-	720	1440	1680
C5	Low	-	240	480	-
	Medium	-	480	720	-
	High	-	720	1440	1680
	Very high	-	-	-	2688
CX	Maritime	-	-	-	4200

SELECTING THE RIGHT ANTI-CORROSIVE SYSTEM

There are important factors to consider when selecting an anti-corrosion system:

1. Corrosivity of the environment

It is important to know the following:

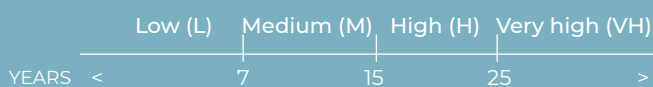
- Humidity and temperature
- Exposure to UV rays
- Exposure to chemicals
- Exposure to mechanical agents (sand, hail, gravel, etc.)

2. Surface type and environment

The system changes whether the surface to be treated is indoor, outdoor or a maritime surface. The choice is also influenced by the type of material that is to be treated, f.ex. steel and its different levels of preparation.

3. Required durability

The required lifetime of the paint system until maintenance is stipulated. It is specified that a visual inspection must be carried out every 2 years, and a partial maintenance is necessary when the degree of corrosion is at Ri 3 level (1% of corroded surface). ISO 12944 has specified 4 time ranges:



4. Paint process

The painting process must be adapted to avoid corrosion:

- Surface Preparation
- Humidity and ambient temperature
- Total system thickness
- Drying time
- Overcoating and drying intervals

ANTI-CORROSIVE PAINT SYSTEMS

NEW HIGH TECHNOLOGY SYSTEMS

The standard allows certification to be obtained through new technology systems that give the same result with lower micron ratings, provided they are met and validated according to ISO 12944-6.

Certified system	Durability	Metal preparation	Primer Coat	Coats x microns	Intermediate Coat	Coats x microns	Top Coats	Coats x microns	Total microns		
NEW	HIGH- TECH. SYSTEM	C3 HIGH Alkyd	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Multi-support Primer (Prod. Code 270--)	90 µ	Dynaline (Prod.Code 02800) or Junorapid* (Prod. Code 8888-)	90 µ	-	-	180 µ
		C3 HIGH Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Poxenamel 2/C (Prod. Code 0848-)	140 µ	-	-	-	-	140 µ
		C4 HIGH Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	High Build Poxenamel 2/C (Prod. Code 0843-)	140 µ	-	-	-	-	140 µ
	C4 HIGH Epoxy-Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Dynapok HBAC Aluminium 2/C (Prod. Code 07765)	120 µ	Poxemyc UV 2/C (Prod. Code 088-) or Junoretano* (Prod. Code 8888-)	80 µ	-	-	-	200 µ
	C4 HIGH Epoxy-Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Zinc-rich epoxy primer (Prod. Code 22805)	70 µ	Poxemyc UV 2/C (Prod. Code 088-) or Junoretano* (Prod. Code 8888-)	50 µ	-	-	-	120 µ
	C5 HIGH Epoxy-Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Zinc-rich epoxy primer (Prod. Code 22805)	70 µ	Poxemyc UV 2/C (Prod.Code 088-) or Junoretano* (Prod. Code 8888-)	100 µ	-	-	-	170 µ
	C5 HIGH Epoxy-Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Epoxy Zinc 2/C Primer (Prod. Code 22805)	40 µ	Dynapok 2/C Epoxy HBAC Aluminium 2/C (Prod. Code 07765)	120 µ	Poxemyc UV 2/C (Prod. Code 088-) or Junoretano* (Prod. Code 8888-)	80 µ	-	240 µ
	H. T. system	C5 HIGH Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Poxenamel HB 2/C (Prod. Code 0843-)	140 µ	-	-	-	-	140 µ
	C5 HIGH Epoxy-Polyurethane	15-25 years	Abrasive blast cleaning to SA 2½ - 30 µ	Dynapok 2/C Primer (Prod. Code 22722)	50 µ	Dynapok HBAC (Prod. Code 07765)	125 µ	Poxemyc UV 2/C (Prod. Code 088-) or Junoretano* (Prod. Code 8888-)	80 µ	-	255 µ

*For batch sizes below 100 Litres - supplied as JUNORETANO 2/C or tinting system products.

HIGH TECHNOLOGY
Paint systems

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