

# WEG Motors Painting Plans & Environmental Corrosivity correlations



The category of corrosivity is associated to dimensional losses of carbon steel, as showed at table 1.

The unprotected metal is exposed to climatic and environmental conditions. According to graph B at Figure 1, carbon steel may suffer dimensional loss of 40  $\mu\text{m}$  under highly polluted atmosphere (P3), at non-coastal region (S0), 39  $^{\circ}\text{C}$  and relative humidity of 78%, during the first year of exposure.

Therefore, this environment was classified as C3. According to table 2, WEG Painting Plan 205 is recommended to guarantee high protection.

Table 1 - Category of corrosivity according to metal loss ( $\mu\text{m}$ ) of one-year exposed carbon steel.

Category of corrosivity	Minimum	Maximum
C1	0,0	1,3
C2	1,3	25
C3	25	50
C4	50	80
C5	80	200
CX	200	700

Figure 1 - Environmental effect over one-year exposed carbon steel.

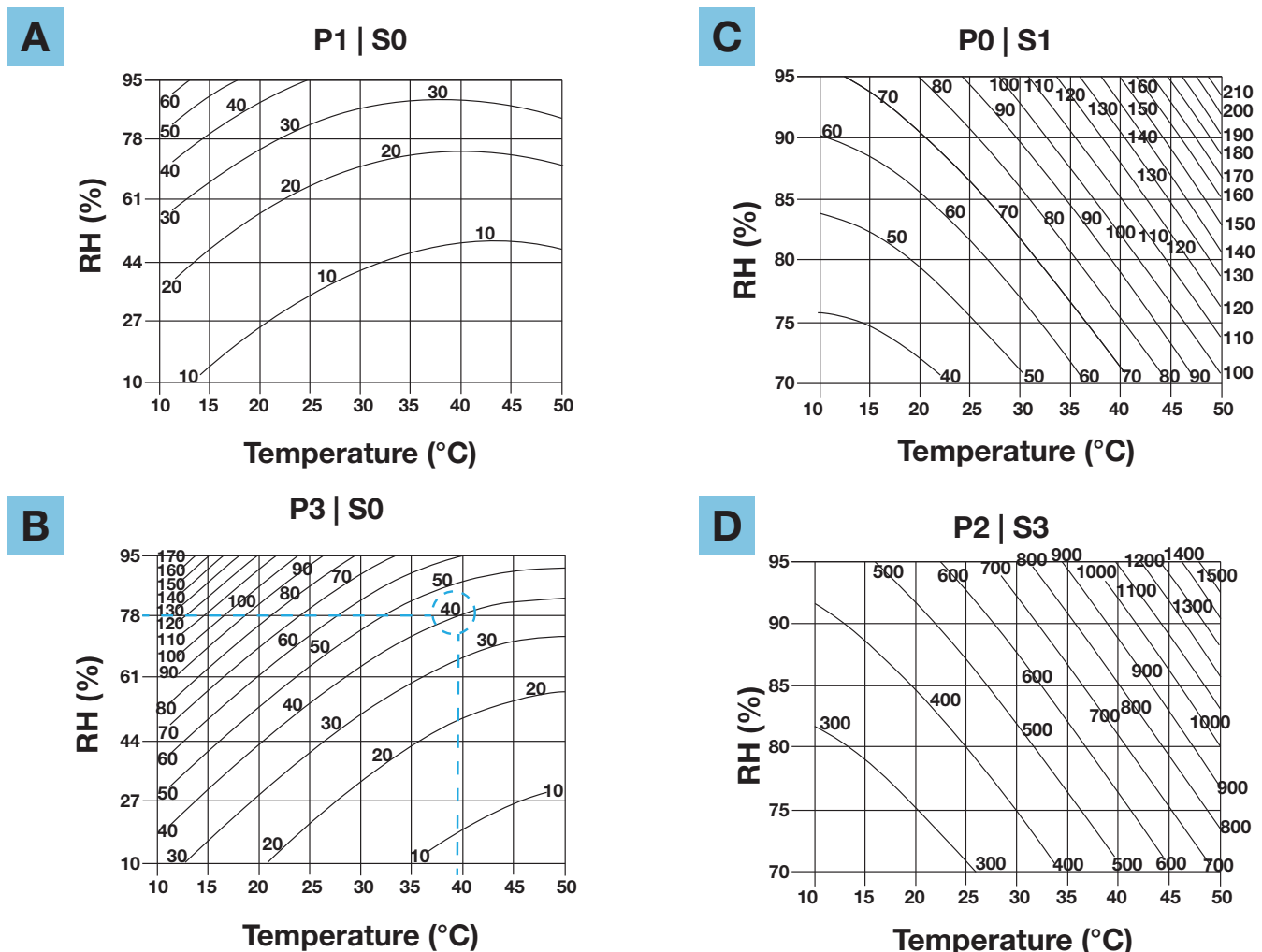


Table 2 - WEG Motors Painting Plans & Environmental Corrosivity correlations

ISO 12944-2	CATEGORIES OF CORROSIVITY							
	C2	C3	C4	C5	CX			
ISO 14713-1	DURABILITY: Low (up to 7 years), Medium (7 - 15 years), High (15 - 25 years), Very high (above 25 years).							
	High	Low	Medium	Low	Medium	Very high		
WPR-6618	WEG MOTORS PAINTING PLANS							
Steel	207 N	203 A 207 A	205 E 205 P	205 E 205 P	202 E 202 P 214 P *	211 E 211 P**	212 E 212 P	212 P
Cast iron								
Aluminum					-			
Forged steel	-							
ISO 9223	POLLUTION AND SALINITY CATEGORIES							
Polluted atmosphere	Rural: P0, Urban: P1, Industrial: P2, Highly polluted industrial: P3.							
	P0 to P1	P1 to P2	P2 to P3	P2 to P3	P3			
Salinity	Distance from shore: S0 (above 30 km), S1 (10 - 30 km), S2 (below 10 km), S3 (below 200 m).							
	S0	S1 to S2	S1 to S2	S1 to S2	S3			

\* According to Petrobrás Standard N1735 (condition 1 – advisory letter to CENPES).

\*\* According to Petrobrás Standard N1735 (Condition 1 – Option 1).

**Do you still have questions?**  
Please, contact the nearest WEG office.  
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