

Reclamation lab and field testing tables:

Laboratory Performance Testing - 6 months' exposure

Testing Type	Test Method	Conditions	Desired Performance
Corrosion Testing: Immersion	ASTM D1654	immersion in 18 M-ohm deionized water	< 0.1 inches undercutting
Corrosion Testing: Immersion	ASTM D1654	immersion in Harrison's solution, which is 0.5 g/L NaCl, 3.5 g/L (NH ₄) ₂ SO ₄	< 0.1 inches undercutting
Corrosion Testing: Cyclic	ASTM D5894/ ASTM D1654	1 week alternating exposure schedule in the following repeating order: QUV, FOG	< 0.1 inches undercutting
Corrosion Testing: Cyclic	BOR/ ASTM D1654	1 week alternating exposure schedule in the following repeating order: QUV, FOG, HAR, FOG	< 0.2 inches undercutting
Physical Testing: Disbondment	NACE TM0115	cathodic disbondment	0.5 inches disbondment
Physical Testing: Erosion Resistance	USBR-5071-2015	stabilized weight loss rate on 11-inch diameter coated plate	< 0.05 g/hr weight loss

Physical Testing: Abrasion Resistance	ASTM D4060	weight loss measured after 1000 cycles, CS-17 wheels resurfaced after 500 cycles, 1 kg load	< 100 mg weight loss
Physical Testing: Impact resistance	ASTM D2794		> 40 inch-lbs
Physical Testing: Pull-off adhesion	ASTM D4541		> 800 psi
Physical Testing: Wet adhesion, pull-off adhesion and knife adhesion	ASTM D4541/ASTM D6677	test performed on HAR and DI panels, post immersion	> 800 psi (ASTM D4541) and > 5 rating (ASTM D6677)

Field Performance Testing - 14 months' exposure

Testing Type	Test Method	Desired Performance
Corrosion Testing	EIS (ISO 16773 / ASTM G106)	> 10 ⁹ ohms impedance at 0.1 Hz
Corrosion Testing	ASTM G102 - corrosion rate / weight loss (before and after)	0.1 mils per year (mpy) uniform metal thickness loss
Corrosion Testing	ASTM D660 - degree of checking	> 8 rating
Corrosion Testing	ASTM D661 - degree of cracking	> 8 rating
Corrosion Testing	ASTM D610 - degree of rusting	> 9 rating
Corrosion Testing	ASTM D1654- undercutting	< 0.1 inches undercutting