

## DRIVING SURFACE PERFECTION™



RAPTOR Test Report: Reference: - AB12161 - Page 1

Updated May 2017

Authorized by A Blackburn

Brief: - ASTM or equivalent testing externally verified for U-POL Raptor to support technical sales.

Method: Materials prepared as set out in relevant test method. Where a primer is used this we have applied 2-coats of U-POL epoxy primer and allowed to cure overnight. Unless otherwise stated the substrate is cold rolled steel prepared by abrading with 80 grit abrasive, cleaned and degreased before subsequent coating applied. RAPTOR was applied using a Shutz gun at 50 psi. Application as one medium and one light coat with a 60-minute flash off time observed between coats resulting in a dry film build  $\approx 330\mu$ .

RAPTOR was allowed to cure at room temperature for a minimum of 14-days before testing.

Property	Test Method	U-POL Raptor	U-POL Raptor over U-POL Epoxy primer
Salt Spray Resistance	ASTM B 117-16	Scribe creep (maximum width both sides) 250hrs:- 1.3mm 500hrs:- 2.6mm 750hrs:- 3.0mm	Scribe creep (maximum width both sides) 250hrs:- 1.05mm 500hrs:- 1.50mm 750hrs:- 2.32mm
Water Immersion	ASTM D870-15 (38°C for 30-days)	Slight to moderate color change (fading) no blistering	Slight to moderate color change (fading) no blistering
Taber Abrasion	ASTM D4060-14 (CS-10	8590 cycles until wear	
Resistance	1000g wheel)	through to substrate	
Pencil Hardness	ASTM D3363- 05(2011)e2	Gouge hardness of 6H	
Adhesion	ASTM D3359-09e2 Method A	5A (No peeling or removal)	5A (No peeling or removal)
Chip Resistance	ASTM D3170/D3170M- 14 (Physical Count)	23°C:- 8 C 30°C:- 8 B 0°C:- 8 C	23°C:- 8 B 30°C:- 8 B 0°C:- 8 B
Impact Resistance	ASTM D2794-93(2010)	23°C:- 93 inch pounds (10.5 Joules) 30°C:- 70 inch pounds (7.9 Joules) 0°C:- 64 inch pounds (7.2 Joules)	23°C:- 68 inch pounds (7.7 Joules) 30°C:- 104 inch pounds (11.75 Joules) 0°C:- 46 inch pounds (5.2 Joules)



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Cont.

Property	Test Method	U-POL Raptor		
Chemical Resistance	ASTM D1308 Method	60-minutes	16-hours	
	3.1.2 Spot Test, Open	Pass = No visual change	Pass = No visual change	
		in color or gloss and no	in color or gloss and no	
		blistering.	blistering.	
		Xylene:- Pass	Adhesion (ASTM D3359	
		10% NaOH:- Pass	Method A)	
		Hydraulic Oil:- Pass	Xylene:- Pass.	
		Gasoline:- Pass	Adhesion 2A	
		Diesel:- Pass	10% NaOH:- Pass.	
		Water:- Pass	Adhesion 5A	
		50% Ethylene Glycol:-	Hydraulic Oil:- Pass.	
		Pass	Adhesion 5A	
		Motor Oil:- Pass	Gasoline :- Pass.	
			Adhesion 5A	
			Diesel:- Pass.	
			Adhesion 5A	
			Water:- Pass.	
			Adhesion 5A	
			50% Ethylene Glycol:-	
			Pass.	
			Adhesion 5A	
			Motor Oil:- Pass.	
			Adhesion 5A	
Dielectric Breakdown	ASTM D 149	Breakdown voltage:-1.5kV		
		Breakdown strength:-4.8 kV/mm		
Flammability of coating	FMVSS 302, ISO 3795	0.0 mm/min SF (requirem	nent in FMVSS 302 <100	
	and BS AU 169a	0.0 mm/min SE (requirement in FMVSS 302 ≤100 mm/min		
Anti Slip	BS 7976-2	Dry:- Pendulum test value 54, slip risk <b>Low</b> Wet:- Pendulum test value 23, slip risk <b>High</b>		
		With Raptor Traction:-		
		Dry:- Pendulum test value 58, slip risk <b>Low</b>		
			Wet:- Pendulum test value 45, slip risk <b>Low</b> TRL #55 Slider- Raptor : 27	
	ASTM E303-93	TRL #55 Slider- Raptor : 2		
		TRL #55 Slider- Raptor Traction : 54		

ASTM reports available on request.

QUALITY SERVICE VALUE INNOVATION TRUST