



DIAMOND
COATINGS



Diamond Coatings – DIA.HC-SON Hard-Coat

INTRODUCTION

The DIA.HC-SON Hard-Coat is a two-sided protective coating which offers superior surface hardness and durability to the substrate, with improved optical transmission over standard polycarbonate.

This resistive coating protects the substrate from scratching and general wear and protects the cosmetic quality and appearance of the plastic. DIA.HC-SON boasts excellent print adhesion and offers great product properties.

The DIA.HC-SON Hard Coat comes in a range of thicknesses and can be applied to various geometry of parts.

It is recommended that this product is stored in less than 30°C conditions, with RH 40~60% indoor.

DIAMOND COATINGS LTD.

Unit 3&4 Sterling Park, Pedmore Road,
Brierley Hill,
West Midlands, DY5 1TB
Tel: +44 (0) 121 550 9430
Email: enquiries@diamondcoatings.co.uk
Web: www.diamondcoatings.co.uk

DIAMOND COATINGS INC.

4830 S. 36th Street,
Phoenix, Arizona,
85040
Tel: +1 (480) 999 3456
Email: sales@diamondcoatings.com
Web: www.diamondcoatings.com



DIAMOND
COATINGS



Diamond Coatings – DIA.HC-SON Hard-Coat

Coating Capabilities

STANDARD PERFORMANCE TABLE

Properties	Test Item	Unit	Results	Test Method
Optical Properties	Transmittance	%	More 90	JIS-K7105
	Haze	%	Less 0.5	JIS-K7105
	Refractive Index	-	1.49	JIS-K7105
Physical Properties	Pencil Hardness	-	HB	JIS K-5600
	Scratch Resistance	-	No Scratch	Steel wool #0000 175g/50 times
	Ball Drop	-	No Crack	32g Steel Ball 10mm, 3 times
General Properties	Adhesion	-	100/100	1mm Cross Cut, 3M Tape, 3 times
	Heat & Water Resistance	-	No Change	85°C, 85% 72H
	Heat Temperature & Humidity	-	100/100	60°C 90% 72H
	Heat Cycle	-	No Change	-40°C 1hour ↔ 85°C 1hour 30cycles
Chemical Properties	0.5% Acid	-	No Change	R.T 24H
	0.5% Alkali		No Change	
	0.5% Salt		No Change	
	Methyl Alcohol		No Change	
	Ethyl Alcohol		No Change	
	IPA		No Change	

DIAMOND COATINGS LTD.

Unit 3&4 Sterling Park, Pedmore Road,
Brierley Hill,
West Midlands, DY5 1TB
Tel: +44 (0) 121 550 9430
Email: enquiries@diamondcoatings.co.uk
Web: www.diamondcoatings.co.uk

DIAMOND COATINGS INC.

4830 S. 36th Street,
Phoenix, Arizona,
85040
Tel: +1 (480) 999 3456
Email: sales@diamondcoatings.com
Web: www.diamondcoatings.com



DIAMOND
COATINGS



Diamond Coatings – DIA.HC-SON Hard-Coat

Adhesion of Ink

Item	Ink	Curing Agent	Cross Cut Test		Remark
			After 70°C/40min	After 2 hours	
Colour Chip	Seiko Black	10%	100/100	100/100	Silk Screen Printing
Colour Chip	JUJO AP Black	10%	100/100	100/100	
Colour Chip	Seiko C/Grey	10%	100/100	100/100	
Colour Chip	Seiko Mirror	No2 : No3	100/100	100/100	
Colour Chip	Seiko Mirror	D curing agent 3%	100/100	100/100	
Colour Chip	JUJO Mirror	JA970 3%	100/100	100/100	
Colour Chip	Seiko Transparency	10%	100/100	100/100	
Colour Chip	JUJO Transparency	10%	100/100	100/100	

Metalising Test (Ni10%)

No	Item	Method	Result	Remark
1	Inspection	Eye checking	OK	
2	Adhesion	Cross cut	100/100	
3	Adhesion of print	Cross cut	100/100	
4	Etching	FeCl6HO	OK	

UI94 Flammable Ratings

Polycarbonate (PC)with Acrylic coating., furnished as sheets.											
Material Dsg	Colour	Min. Thk mm	Flame Class	R T I					V T	4 9	C T
				W	A	Elec	Mech				
CF(#)(+)ECO	NC			I	I		Imp	Str	R	5	I
		1.5	V-1	-	-	50	50	50	-	-	-
		2.0	V-1	-	-	50	50	50			
		3.0	V-0	-	-	50	50	50			
CFC(+) ECO(@)H	NC	1.5	V-0	-	-	50	50	50	-	-	-
		2.0	V-0	-	-	50	50	50			
		3.0	V-0	-	-	50	50	50			

DIAMOND COATINGS LTD.

Unit 3&4 Sterling Park, Pedmore Road,
Brierley Hill,
West Midlands, DY5 1TB
Tel: +44 (0) 121 550 9430
Email: enquiries@diamondcoatings.co.uk
Web: www.diamondcoatings.co.uk

DIAMOND COATINGS INC.

4830 S. 36th Street,
Phoenix, Arizona,
85040
Tel: +1 (480) 999 3456
Email: sales@diamondcoatings.com
Web: www.diamondcoatings.com