

P: 1 905 822 4111 F: 1 905 823 1446

 $info.toronto.industrials@element.com\\element.com$

Dynamic Wind Uplift Resistance CSA A123.21-2014 – Summary Document

Document No.: 19-06-B0127-AARS016-A RV1

Document Date: November 11, 2019

Reference Documentation:

CSA A123.21-2014 Report No: 18-06-B0053-2 Supplementary Report No.: 19-06-B0042-M

Manufacturer:	IKO Industries Ltd.	®	IKO System Identification:
	40 Hansen Road South		iko system identification.
	Brampton, Ontario, Canada		AARS016
	L6W 3H4		AARSUIO

SECTION 1.0: Roof System Summary:

"IKO MOD-BIT PROTECTOBASE & ADHERED ISOX & THERMAL BARRIER" – Adhesive Adhered Roofing System		
Roof Membrane – Cap Sheet:	IKO Torchflex TP-180 Cap	
Roof Membrane/Cover Board: IKO Protectobase 180		
Insulation:	ISOX ISOX Type 1/IKOTherm Composite Board	
Insulation:	IKO IKOTherm	
Vapour Retarder:	IKO Torchflex TF-95-FF	
Thermal Barrier:	GP 12.7 mm (1/2") DensDeck Prime®	
Deck:	Steel Deck, 22 ga, RD938, 230 MPa (33.4 ksi)	

SECTION 2.0: System Dynamic Wind Uplift Resistance (DUR) Testing Details:

Test Date	Dynamic Wind Uplift Resistance (DUR) of tested specimen kPa (psf)	Dynamic Wind Uplift Resistance (DUR)* Rating (with 1.5X safety factor) kPa (psf)
April 5, 2019	5.3 (112)	3.6 (75)

Dynamic Wind Uplift Resistance Rating (DUR): 3.6 kPa (75 psf)

SECTION 3.0: Tested Product and Substitutable Products:

Roof Membrane (Cap Sheet)				
Tested Product	IKO Torchflex TP-180-Cap	IKO Torchflex TP-180-Cap		
Product Size	Roll Width: 1 m (39.6"), roll Len	Roll Width: 1 m (39.6"), roll Length 8 m (26')		
Attachment Method	Heat Welded	Heat Welded		
Substitutable Product(s)				
Manufacturer		Product Identification		
IKO Industries Ltd.	Torchflex TP-HD-Cap	Torchflex TP-250-Cap	Torchflex TP-250-Cap (5 mm)	
	PrevENt TP-250-Cap	PrevENt TP-HD-Cap	PrevENt Premium TP-250-Cap	
	ArmourCool Granular TP-HD	PrevENt ArmourCool Granular TP	PrevENt ArmourCool HD Cap	
	Carrara ArmourCool HD			
IKO Industries Ltd.	Modiflex MP-180-cap	Modiflex MP-250-cap	Modiflex MP-HD-cap	
	PrevENt MP-250-cap	PrevENt MP-HD-cap		

Roof Membrane Base Sheet/Cover Board		
Tested Product	IKO Protectobase 180	
Product Size	5.4 x 914 x 2440 mm (3/16" x 3' x 8')	
Attachment Method	Ribbon adhered with IKO Millennium adhesive	
Fastening Rate	305 mm (12") o.c.	
	Substitutable Product(s)	
Manufacturer	Product Identification	
IKO Industries Ltd.	Protectoboard with Torchflex TP-180-FF-Base	

Insulation (Top Layer)				
Tested Product	ISOX ISOX Type 1/IKOTherr	ISOX ISOX Type 1/IKOTherm Composite Board		
Product Size	76 x 1220 x 1220 mm (3" x 4	76 x 1220 x 1220 mm (3" x 4' x 4')		
Attachment Method	Ribbon adhered with IKO Mil	Ribbon adhered with IKO Millennium adhesive		
Fastening Rate	305 mm (12") o.c.	305 mm (12") o.c.		
	Substituta	ble Product(s)		
Manufacturer	Manufacturer Product Identification			
	IKOTherm ISOX ISOX Type 1/IKOTherm Composite Board Tapered			
IKO Industries Ltd.	IKOTherm III	IKOTherm 25 psi	IKOTherm III 25 psi	
	IKOTherm Tapered	IKOTherm III Tapered	IKOTherm 25 psi Tapered	

Insulation (Bottom Layer)				
Tested Product	IKO IKOTherm			
Product Size	38 x 1220 x 1220 mm (1.5" x	38 x 1220 x 1220 mm (1.5" x 4' x 4')		
Attachment Method	Ribbon adhered with IKO Millennium adhesive			
Fastening Rate	305 mm (12") o.c.			
	Substitutable Product(s)			
Manufacturer	Product Identification			
IKO Industries Ltd.	IKOTherm III	IKOTherm 25 psi	IKOTherm III 25 psi	
	IKOTherm Tapered	IKOTherm III Tapered	IKOTherm 25 psi Tapered	



Vapour Retarder				
Tested Product	IKO Torchflex TF-95-SF	IKO Torchflex TF-95-SF		
Product Size	Roll Width: 1 m (39.4"), roll Lengt	Roll Width: 1 m (39.4"), roll Length 8 m (26.2'), (2.2 mm / 0.087") with 76 mm (3") Overlap		
Attachment Method	Heat Welded to substrate primed	Heat Welded to substrate primed with IKO Mod-Bit Primer adhesive		
Fastening Rate	n/a	n/a		
	Substitutable Product(s)			
Manufacturer		Product Identification		
IKO Industries Ltd.	Torchflex TP-180-SF			
IKO Industries Ltd	Modiflex MF-95-SS	Modiflex MP-180-SS		

Thermal Barrier		
Tested Product	GP DensDeck Prime®	
Product Size	12.7 x 1220 x 2440 mm (1/2" x 4' x 8')	
Attachment Method	Ribbon adhered with IKO Millennium adhesive	
Fastening Rate	305 mm (12") o.c.	
	Substitutable Product(s)	
Manufacturer	Product Identification	
n/a	n/a	

Assembly Adhesive Securement		
Tested Product	Product IKO Millennium adhesive – ribbon adhered	
Fastening Rate	305 mm (12") o.c.	
Substitutional Product(s)		
Manufacturer	Manufacturer Product Identification	
n/a	n/a	

Note: This is not a comprehensive report but a <u>summary</u> of the performance results produced for the roof assembly documented herein tested in accordance to CSA A123.21-2014. Please refer to the reference documents stated on page 1, or consult the manufacturer, for detailed information pertaining to the test specimen configuration and construction.

Reported by:

Allan Lawrence, Ext. 11212 Supervisor, Building Systems Industrials Division Authorized by:

Jordan Church, B. Tech., Ext. 11546

Ops. / Tech. Manager, Bldg. Science & Fire Testing

Industrials Division

Accreditation: Element is an ISO 17025 accredited test lab under International Accreditation Service "TL-407". In addition, CSA A123.21 can be found under our scope of accreditation listing.