

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-AARS011-A

Document Date: October 11, 2019

Reference Documentation:

CSA A123.21-2014 Report No: 18-06-B0147-2 Supplementary Report No.: 19-06-B0042-M

Manufacturer:	IKO Industries Ltd.	®	IKO System Identification:
	40 Hansen Road South		iko System identinication.
	Brampton, Ontario, Canada		AARS011
	L6W 3H4		AARSUII

### **SECTION 1.0: Roof System Summary:**

"IKO MOD-BIT ISOX WITH MVP & THERMAL BARRIER" – Adhesive Adhered Roofing System		
Roof Membrane - Cap Sheet:	IKO Torchflex TP-180 Cap	
Roof Membrane – Base Sheet	IKO Torchflex TF-95-FF-Base	
Cover Board:	IKO Protectoboard	
Insulation:	ISOX ISOX Type 1/IKOTherm Composite Board	
Insulation:	IKO IKOTherm	
Vapour Retarder:	IKO AmourGard Ice and Water Protector Commercial	
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)
August 28, 2018	5.5 (94)	3.0 (62.5)

Dynamic Wind Uplift Resistance Rating (DUR): 3.0 kPa (62.5 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	gth 8 m (26')		
Attachment Method	Heat Welded			
Substitutable Product(s)				
Manufacturer		Product Identification		
	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	
IKO Industries Ltd.	ArmourCool Granular TP-HD	PrevENt ArmourCool	PrevENt ArmourCool HD Cap	
	Carrara ArmourCool HD	Granular TP		
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)			
Tested Product	IKO Torchflex TF-95-FF-Base		
Product Size	Roll Width: 1 m (39.6"), roll L	ength 15 m (49')	
Attachment Method	Heat Welded		
	Substitutable Product(s)		
Manufacturer	Product Identification		
IKO Industries Ltd.	Torchflex TF-95-SF-Base	Torchflex TP-180-FF-Base	Torchflex TP-180-SF-Base
INO industries Ltd.	Torchflex HD-FF-Base		
	Modiflex MF-95-FS-Base	Modiflex MF-95-SS-Base	Modiflex MP-180-FS-Base
IKO Industries Ltd.	Modiflex MP-180-SS-Base	Modiflex MP-180-FS-Base 3mm	Modiflex MP-HD-FS-Base
	Modiflex MP-HD-SS-Base		

Cover Board		
Tested Product	IKO Protectoboard	
Product Size	3 x 1220 x 1524 mm (1/8" x 4' x 5')	
Attachment Method	Ribbon adhered with IKO Millennium adhesive	
Fastening Rate	305 mm (12") o.c.	
	Substitutable Product(s)	
Manufacturer	Product Identification	
IKO Industries Ltd.	Protectobase 180	



Insulation (Top Layer)			
Tested Product	ISOX ISOX Type 1/IKOThe	ISOX ISOX Type 1/IKOTherm Composite Board	
Product Size	76 x 1220 x 1220 mm (3" x	4' x 4')	
Attachment Method	Ribbon adhered with IKO M	Ribbon adhered with IKO Millennium adhesive	
Fastening Rate	305 mm (12") o.c.	305 mm (12") o.c.	
Substitutable Product(s)			
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 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
INO industries Ltd.	IKOTherm Tapered	IKOTherm III Tapered	IKOTherm 25 psi Tapered

Vapour Retarder			
Tested Product	IKO AmourGard Ice and Water Protector Commercial		
Product Size	Roll Width: 0.914 m (36"), roll Length 24.4 m (8	80')	
Attachment Method	Self-adhered to substrate primed with IKO S.A.M. adhesive		
Fastening Rate	n/a		
	Substitutable Product(s)		
Manufacturer	Product Identification		
IKO Industries Ltd.	MVP	MVP Sand	
INO maustries Lta.	Armourbond Flash Sand		

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	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.

This document and service are covered under Element Materials Technology Canada Inc.'s. Standard Terms and Conditions of Contract which may be found on our company's website <a href="www.element.com">www.element.com</a>, or by calling 1-866-263-9268.