

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

Document No.: 19-06-B0127-MARS005-A RV1
Document Date: November 11, 2019

Reference Documentation:

CSA A123.21-2014 Report No: System A – 19-06-B0117-1
System B – IKOI-DRS-00210665-05-5100
System C – 19-06-B0112-1
System D – IKOI-DRU-00224994-01-5100

Supplementary Report No.: 19-06-B042-M

Manufacturer:	IKO Industries Ltd.		IKO System Identification:
	40 Hansen Road South		
	Brampton, Ontario, Canada		
	L6W 3H4		MARS005

SECTION 1.0: Roof System Summary:

“IKO MOD-BIT FAST-N-STICK 180 BASE SYSTEM” – Mechanically Attached Roofing System	
Roof Membrane – Cap Sheet:	IKO Torchflex TP-180-Cap
Roof Membrane – Base Sheet:	IKO Fast-N-Stick 180-Base
Insulation:	IKO IKOTherm
Insulation:	IKO IKOTherm
Vapour Retarder:	IKO Armourgard Vapour Retarder
Thermal Barrier:	None
Deck:	Steel Deck, 22 ga, RD938, 230 MPa (33.4 ksi)

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

Test Date	System Designation	Dynamic Wind Uplift Resistance (DUR) of tested specimen kPa (psf)	Dynamic Wind Uplift Resistance (DUR)* Rating (with 1.5X safety factor) kPa (psf)
August 27, 2018	A	4.3 (90)	2.9 (60)
June 25, 2013	B	5.0 (105)	3.4 (70)
August 23, 2019	C	9.8 (206)	6.6 (138)
April 27, 2015	D	7.2 (150)	4.8 (100)

Dynamic Uplift Resistance Rating (DUR) System A: 2.9 kPa (60 psf)

Dynamic Uplift Resistance Rating (DUR) System B: 3.4 kPa (70 psf)

Dynamic Uplift Resistance Rating (DUR) System C: 6.6 kPa (138 psf)

Dynamic Uplift Resistance Rating (DUR) System D: 4.8 kPa (100 psf)

SECTION 3.0: Tested Product and Substitutable Products:

Roof Membrane (Cap Sheet)			
Tested Product	IKO Torchflex TP-180-Cap		
Product Size	Roll Width: 1 m (37"), roll Length 8 m (26')		
Attachment Method	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)		
Tested Product	IKO Fast-N-Stick 180 Base	
Product Size	Roll Width: 1 m (39.6"), roll Length 15 m (49')	
Attachment Method	Mechanically attached	
Fastener Spacing	In-seam fastening - see securement section for details	
Substitutable Product(s)		
Manufacturer	Product Identification	
IKO Industries Ltd.	Torchflex TP-180-FF Base	Torchflex TP-180-SF-Base
	Torchflex HD-FF-Base	
IKO Industries Ltd.	Modiflex MP-180-FS Base	Modiflex MP-180-SS-Base
	Modiflex MP-HD-FS-Base	Modiflex MP-HD-SS-Base

Cover Board	
Tested Product	Optional layer
Product Size	n/a
Attachment Method	Loose laid, pre-secured or adhered
Fastening Rate	n/a
Substitutable Product(s)	
Manufacturer	Product Identification
IKO Industries Ltd.	Protectoboard
Generic	Any approved Gypsum Board meeting the requirements of ASTM C1177 or ASTM C1278
Generic	Any approved wood fiberboard meeting the requirements of CAN/ULC S-706 and ASTM C208

Insulation (Top Layer)			
Tested Product	IKO IKOTerm		
Product Size	51 x 1220 x 2440 mm (2" x 4' x 8')		
Attachment Method	Loose laid, pre-secured or adhered		
Fastening Rate	n/a		
Substitutable Product(s)			
Manufacturer	Product Identification		
IKO Industries Ltd.	IKOTerm III	IKOTerm 25 psi	IKOTerm III 25 psi
	IKOTerm Tapered	IKOTerm III Tapered	IKOTerm 25 psi Tapered

Insulation (Bottom Layer)			
Tested Product	IKO IKOTerm		
Product Size	51 x 1220 x 2440 mm (2" x 4' x 8')		
Attachment Method	Loose laid, pre-secured or adhered		
Fastening Rate	n/a		
Substitutable Product(s)			
Manufacturer	Product Identification		
IKO Industries Ltd.	IKOTerm III	IKOTerm 25 psi	IKOTerm III 25 psi
	IKOTerm Tapered	IKOTerm III Tapered	IKOTerm 25 psi Tapered

Vapour Retarder			
Tested Product	IKO Armourgard Vapour Retarder		
Product Size	Roll Width: 0.9 m (36"), Roll Length 20 m (65'), 1.4 mm (0.053"), 50.8 mm (2") Overlap		
Attachment Method	Loose laid or 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	
	Armourbond Flash Sand	Armourgard Ice and Water Protector Commercial	
Generic	Any approved generic Kraft Paper or polyethylene vapour retarder		

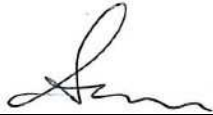
Thermal Barrier		
Tested Product	Optional layer	
Product Thickness	n/a	
Attachment Method	Loose laid, pre-secured or adhered	
Fastening Rate	n/a	
Substitutable Product(s)		
Manufacturer	Product Identification	
Georgia-Pacific®	DensDeck®	DensDeck Prime®
USG®/CGC	Securock® Glass-Mat	Securock® Gypsum-Fiber
Generic	Any approved Gypsum Board meeting the requirements of ASTM C1177 or ASTM C1278	

Membrane Securement - System A				
System Designation	Fastener Spacing (on centre)		Row Spacing (on centre)	
	mm	Inch	mm	Inch
A	457	18	890	35
Tested Product	Trufast® #14 HD Roofing Fastener with 2.4" (60 mm) round (MP-2400) Barbed Metal Seam Plate			
Substitutable Product(s)				
Manufacturer	Product Identification			
OMG®	#14 Heavy Duty Roofing Fastener with 2.4" (60 mm) round (PGA238) Barbed Seam Plate			

Membrane Securement - System B, C, D				
System Designation	Fastener Spacing (on centre)		Row Spacing (on centre)	
	mm	Inch	mm	Inch
B	305	12	890	35
C	152	6	890	35
D	305	12	457	18
Tested Product	Trufast® #14 HD Roofing Fastener with 2.4" (60 mm) round (MP-2400) Barbed Metal Seam Plate			
Substitutional Product(s)				
Manufacturer	Product Identification			
SFS	#14 Dekfast™ Fastener with 2.4" (60 mm) round (PLT-R-2-3/8-6B) Barbed Stress Plate			
OMG®	#14 Heavy Duty Roofing Fastener with 2.4" (60 mm) round (PGA238) Barbed Seam Plate			

Note: This is not a comprehensive report but a summary 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 for detailed information pertaining to the test specimen configuration and construction.

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