

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

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Reference Documentation:

CSA A123.21-2014 Report No: 20-06-B0112-4
Supplementary Report No.: 19-06-B0042-M RV2

Manufacturer:	IKO Industries Ltd.		IKO System Identification:
	40 Hansen Road South		
	Brampton, Ontario, Canada		
	L6W 3H4		MARS008

SECTION 1.0: Roof System Summary:

"IKO INNOVI™ TPO MA @ 18" o.c. (8 ft SHEET WIDTH) – Mechanically Attached Roofing System	
Roof Membrane – Cap Sheet:	IKO Innovi TPO – 45 mil
Insulation:	IKO IKOTerm™
Insulation:	IKO IKOTerm™
Vapour Retarder:	IKO Armourgard Vapour Retarder
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 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)
October 19, 2020	5.4 (112.5)	3.6 (75)

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

SECTION 3.0: Tested Product and Substitutable Products:

Roof Membrane (Cap Sheet)		
Tested Product	IKO Innovi TPO – 45 mil	
Product Size	Roll Thickness: 1.14 mm (0.045"), Roll Width: 2.4 m (8'), Roll Length 30.5 m (100')	
Attachment Method	Seam welded and in-seam fastening – see securement section for details	
Substitutable Product(s)		
Manufacturer	Product Identification	
IKO Industries Ltd.	Innovi TPO – 60 mil	Innovi TPO – 80 mil

Cover Board		
Tested Product	Optional layer	
Product Size	12.7 x 1220 x 2440 mm (0.5" x 4' x 8')	
Attachment Method	Pre-secured – see pre-securement section for details	
Fastening Rate	n/a	
Substitutable Product(s)		
Manufacturer	Product Identification	
IKO Industries Ltd.	IKOTherm CoverShield	
Georgia-Pacific®	DensDeck®	DensDeck Prime®
USG®/CGC	Securock® Glass-Mat	Securock® Gypsum-Fiber

Insulation (Top Layer)			
Tested Product	IKO IKOTherm		
Product Size	38 x 1220 x 2440 mm (1.5" x 4' x 8')		
Attachment Method	Pre-secured or loose laid with Cover Board – see pre-securement section for details		
Fastening Rate	n/a		
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

Insulation (Bottom Layer)			
Tested Product	IKO IKOTherm		
Product Size	38 x 1220 x 2440 mm (1.5" x 4' x 8')		
Attachment Method	Loose laid or pre-secured		
Fastening Rate	n/a		
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 Armourgard Vapour Retarder	
Product Size	Roll Width: 2.4 m (96"), Roll Area: 186 m ² (2000 ft ²), Roll Thickness: 1.4 mm (0.053")	
Attachment Method	Loose laid or self-adhered to substrate	
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 IKO approved Kraft Paper or polyethylene vapour retarder	


Thermal Barrier		
Tested Product	GP DensDeck Prime®	
Product Thickness	12.7 x 1220 x 2440 mm (1/2" x 4' x 8')	
Attachment Method	Loose laid or pre-secured	
Fastening Rate	n/a	
Substitutable Product(s)		
Manufacturer	Product Identification	
Georgia-Pacific®	DensDeck®	
USG®/CGC	Securock® Glass-Mat	Securock® Gypsum-Fiber
Generic	Any IKO approved Gypsum Board meeting the requirements of ASTM C1177 or ASTM C1278	

Membrane Securement	
Tested Product	InnoviFast™ #15 Heavy Duty (HD) Fastener with InnoviFast 60 mm (2-3/8") HD Seam Plate (barbed)
Fastener Spacing	457 mm (18") o.c. (in seam)
Row Spacing	2.29 m (7.5 ft) o.c. (in seam)
Substitutable Product(s)	
Manufacturer	Product Identification
SFS - Dekfast™	#15 (DF-#15-PH3) Fastener with 2-3/8" (60 mm) Round Barbed Stress Plate (PLT-R-2-3/8-6B)
Trufast®	#15 EHD Roofing Fastener with 2.4" (60 mm) Round Barbed Metal Seam Plate (MPB-2400)
OMG®	#15 Extra Heavy Duty Roofing Fastener with 2-3/8" (60 mm) Round Barbed Plate (SPGA238B)

Insulation/Cover Board Pre-securement	
Tested Product	IKO InnoviFast™ #12 Insulation Fastener with InnoviFast 76 mm (3") Round Insulation Plate
Fastening Rate	Minimum 1 per 6.4 ft ² (0.60 m ²), Five (5) per 12.7 x 1220 x 2440 mm (1/2" x 4' x 8')
Substitutional Product(s)	
Manufacturer	Product Identification
Trufast®	#12 DP Roofing Fastener with 3" (76 mm) Round Metal Insulation Plate (MP-3000)
SFS - DekFast™	#12 (DF-#12-PH3) Fastener with 3" (76 mm) Round Metal Insulation Plate (PLT-R-3)
OMG®	#12 Standard RoofGrip Drill Point Fastener with 3" (76 mm) Round (Galv. Plate (SPGA3C)


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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