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ENGINEER TEST CONSULT

ROOF SYSTEM ASSESSMENT REPORT DYNAMIC UPLIFT RESISTANCE PER CSA A123.21			
CUSTOMER:	IKO Industries, Inc.	TEST DATE:	2022-05-27
CUSTOMER REF.:	MARS017-A	PUBLICATION DATE:	2025-08-28
DOCUMENT NO.	IKO-MARS-4	REVISION NO.	2
TEST PANEL NO.	IKO-D4	REEVALUATION DATE:	2028-08-28
SYSTEM TYPE:	C-2		

MECHANICALLY ATTACHED ROOFING SYSTEM (MARS) SUMMARY	
ROOFING SYSTEM SUMMARY:	
Roof Cover:	Thermoplastic polyolefin (TPO) single ply, induction welded
Coverboard or Insulation (top):	Polyisocyanurate foam or gypsum-based board, mechanically fixed
Insulation (base):	Polyisocyanurate foam, loose-laid
Vapor Barrier:	6-mil polyethylene, loose-laid or proprietary SBS modified bitumen or HDPE/acrylic, self-adhering
Deck:	steel

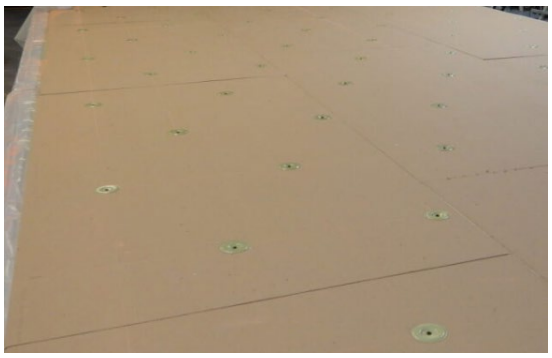
DYNAMIC UPLIFT RESISTANCE PER CSA A123.21:

Sustained Test Value		Design Value CSA A123.21:20 *(Test Value x 0.65)*		Design Value CSA A123.21:14 *(Test Value ÷ 1.5)*	
kPa	**psf**	**kPa**	**psf**	**kPa**	**psf**
-3,6	-75	-2,3	-49	-2,4	-50

PRODUCTS / APPLICATION:

Roof Cover:	Description:	Membrane composed of polyester reinforcement coated with TPO compound		
	Application:	Induction welded		
	Eligible Products:	InnoviTPO (min. nominal 60-mil)		
Coverboard or Insulation (top):	Description:	Polyisocyanurate foam or gypsum-based board		
	Application:	Mechanically fixed		
	Eligible Products:	**By**	**Product**	**Min. Thickness**
		IKO	IKOTherm, IKOTherm III, IKOTherm 25 psi, IKOTherm III 25 psi, IKOTherm Tapered, IKOTherm III Tapered, IKOTherm 25 psi Tapered, IKOTherm III 20 psi or IKOTherm III Tapered 20 psi	38-mm (1.5-inch)
		Georgia-Pacific	DensDeck Prime, DensDeck StormX Prime	13-mm (0.5-inch)
		USG	SECUROCK Gypsum-Fiber Roof Board	

PRODUCTS/APPLICATION (CONTINUED):

Coverboard or Insulation (top) Fasteners:	Description:	Corrosion resistant screw-type roofing fasteners with steel stress plates coated with proprietary coating		
	Fastening Method:	Fasteners installed through stress plates to engage the top flanges of the steel deck		
	Fastening Rate:	Fasteners spaced 0.61-m (2-ft) o.c. in staggered rows spaced 0.61-m (2-ft) o.c. 1 part per 0.37 m^2 (4 ft^2)		
	Eligible Products:	**By**	**Fasteners**	**Plates**
		IKO	InnoviFast Heavy Duty (HD) Fastener	InnoviWeld Induction Plate
		Altenloh, Brinck & Co.	Trufast #15 EHD Fastener	Trufast TPO IW Plate
		SFS Group	Dekfast DF-#15-PH3	isoweld F1-P-6.8-TPO Plate

Insulation (base):	Description:	Polyisocyanurate foam board		
	Application:	One or more layer(s), loose-laid with staggered joints		
	Eligible Products:	**By**	**Product**	**Min. Thickness**
		IKO	IKOTherm, IKOTherm III, IKOTherm 25 psi, IKOTherm III 25 psi, IKOTherm Tapered, IKOTherm III Tapered, IKOTherm 25 psi Tapered, IKOTherm III 20 psi or IKOTherm III Tapered 20 psi	38-mm (1.5-inch)
Vapour Barrier:	Description:	6-mil polyethylene or proprietary self-adhering SBS modified bitumen or HDPE/acrylic		
	Application:	Loose-laid with taped joints or self-adhering		
	Eligible Products:	6-mil polyethylene or IKO MVP, IKO MVP Sand, Armourbond Flash Sand or IKO AcrylicStick SA		
Primer: *(Optional)*	Description:	Solvent-based surface preparation		
	Application:	Liquid applied		
	Eligible Products:	IKO S.A.M. Adhesive or S.A.M Adhesive LVC *Note: Not for use with IKO Acrylic Stick SA*		
Thermal Barrier: *(Optional)*	Description:	Cement-based, gypsum-based or mineral-wool board		
	Application:	Loose-laid, adhered or mechanically-fixed		
	Eligible Products:	Any approved product acceptable to the named customer and the Authority Having Jurisdiction		
Deck:	Tested Product:	Steel roof deck		

NOTES:	
Test Value and Design Value:	The "Test Value" noted herein reflects the ultimate passing test pressure recorded during testing. The "Design Value" herein reflects the "Test Value" multiplied by a resistance factor of 0.65 (same as "Test Value" divided by a safety factor of 1.5) The "Design Value" should meet or exceed the design pressure requirements of the project, as determined in accordance with the current National Building Code of Canada (NBC) requirements.
Equivalence of Other Products:	This report applies only to the products listed as "Eligible Products" herein.
Optional Components:	Components listed herein as "optional" may be removed from the roof system design with no adverse effect on system dynamic wind uplift performance.
As-Tested Deck:	Testing utilized 22 ga., Type B (6-inch deck module) steel deck meeting ASTM A653, A792, A1008 or CSSBI 10M standard and having a yield strength of 275 MPa (40-ksi). Alternate deck displaying equivalent strength and fastener-holding capacity (withdrawal resistance) may be specified at the discretion of the Designer of Record to the satisfaction of the Authority Having Jurisdiction.

Fastener Point-Loads:	**Point-Load**			
	Sustained Test Value		**Design Value**	
	N	**lbf**	**N**	**lbf**
	1334	300	867	195

RSAR SCOPE

Roof System Assessment Reports (RSAR) constitute a summary of allowable products and interfaces used in low-slope roof assemblies based testing in accordance with CSA A123.21 at our ISO/IEC 17025 accredited laboratory.

While RSAR's are reviewed and renewed each 3-years based primarily on report holder declaration, these are not Certification listings, and are not intended to state or imply ongoing quality control / surveillance activities by NEMO at the report holder's facilities.

NEMO ETC, LLC is not, in any way, the Designer of Record for any project on which these RSAR's, or previous versions thereof, is/was used for permitting or design guidance. RSAR's are not to be construed as representing any attributes not specifically listed, nor to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by NEMO ETC, LLC, express or implied, as to any finding or other matter in these RSAR's, or as to any product covered by the RSAR's.

NEMO ETC CREDENTIALS

TYPE	ENTITY	REFERENCE
ISO/IEC 17025 Accreditation	International Accreditation Service (IAS)	TL-689
TAS 301 Certification	Miami-Dade	21-0409.01
Third Party Test Data Program	UL, LLC	DA2862
Test Lab Listing	Roofing Contractors Association of British Columbia	RCABC Labs

REPORT HISTORY

DATE	EVENT	NOTES	AUTHORIZED BY:
2022-08-30	DRAFT	For customer review	RN
2022-08-30	FINAL	After customer review	RN
2022-10-28	REV1	Correct induction-weld plate names	RN
2025-08-27	DRAFT REV2	For customer review, revalidation, reformat, add insulation, vapor barrier and primer options	RN
2025-08-28	REV2	After customer review	RN

END OF REPORT