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ENGINEER

TEST

CONSULT

**ROOF SYSTEM ASSESSMENT REPORT
DYNAMIC UPLIFT RESISTANCE PER CSA A123.21**

CUSTOMER:	Seaman Corporation	TEST DATE:	2019-09-17
DOCUMENT NO.	SMN-MARS-1	PUBLICATION DATE:	2025-07-03
TEST PANEL NO.	SMN-D4	REVISION NO.	4
SYSTEM TYPE:	D-1	REEVALUATION DATE:	2028-07-02

MECHANICALLY ATTACHED ROOFING SYSTEM (MARS) SUMMARY

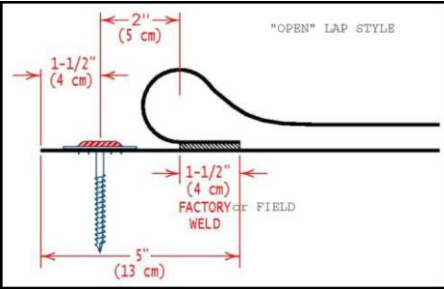
ROOFING SYSTEM SUMMARY:

Roof Cover:	KEE or KEE/PVC co-polymer single ply, mechanically fixed, in-lap
Insulation (top):	Gypsum-based or polyisocyanurate foam board, mechanically fixed
Insulation (base):	Polyisocyanurate foam or polystyrene board, loose-laid
Vapor Barrier:	Polyethylene, loose-laid or proprietary self-adhering membrane
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
-5,9	-124	-3,9	-81	-4,0	-83

PRODUCTS / APPLICATION:

Roof Cover:	Description:	Membrane composed of polyester reinforcement coated with KEE or KEE/PVC co-polymer compound	
	Application:	Mechanically fixed	
	Eligible Products:	FiberTite (nominal 36-mil), FiberTite-SM (nominal 45- or 60-mil), FiberTite-XT (nominal 50- or 60-mil) or FiberTite XTreme (nominal 60-mil)	
Roof Cover Fasteners:	Description:	Corrosion resistant screw-type roofing fasteners with steel stress plates	
	Fastening Method:	Open-attachment configuration with parts spaced max. 152-mm (6-inch) o.c. within the min. 127-mm (5-inch) wide side laps, spaced max. 1.14-m (45-inch) o.c. Laps sealed with min. 38-mm (1.5-inch) heat weld.	
	Fastener Density:	1 part per 0.18 m ² (1.9 ft ²)	
	Eligible Products:	FiberTite Magnum Fasteners with FiberTite Magnum-Plus Plates	

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PRODUCTS/APPLICATION (CONTINUED):

Insulation (top):	Description:	Gypsum-based or polyisocyanurate foam board		
	Application:	Top layer mechanically fixed		
	Eligible Products:	By	Product	Min. Thickness
		Seaman	FTR-Value, FTR-Value A or FTR-Value H	38-mm (1.5-inch)
		Atlas Roofing	ACFoam II	
		Hunter Panels	H-Shield	
		IKO Industries	IKOTerm or IKOTerm III	
		Johns Manville	ENERGY 3	
		Lexsuco	ISOLEX A	
		National Gypsum	DEXcell FA Glass Mat Roof Board	13-mm (0.5-inch)
		Lexsuco	Lexboard 90	13-mm (0.5-inch)
Insulation (top) Fasteners:	Description:	Corrosion resistant screw-type roofing fasteners with steel stress plates		
	Fastening Method:	Fasteners installed through stress plates, positioned to engage the top flange of the steel deck; four (4) parts located 304-mm (12-inch o.c.) from each corner		
	Fastening Rate:	1 part per 0.74 m ² (8 ft ²) 4 parts per 1220 x 2438 (48 x 96-inch) board		
	Eligible Products:	By	Fasteners	Plates
		Seaman	FiberTite #14 Fastener or FiberTite Magnum Fastener	FiberTite 3-inch Steel Plate
		Altenloh, Brinck & Co.	Trufast #14 HD or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plate
		Lexsuco	Lexgrip #14 Heavy Duty Fastener or Lexgrip #15 Extra Heavy Duty Fastener	Lexgrip 3" Galvalume Steel Insulation Plate
		OMG	OMG Roofgrip #14 or OMG XHD	OMG 3 in. Galvalume Steel Plate (Flat), OMG 3 in. Ribbed Galvalume Plate or OMG AccuTrac Flat Bottom Plate
		SFS Group	Dekfast DF-#14-PH3 or DF-#15-PH3	Dekfast PLT-R-3 plate
			Dekfast DF-#14-PH3	SFS TPA50 Polyamide Sleeve
Insulation (base):	Description:	Polyisocyanurate foam or polystyrene board		
	Application:	One or more layer(s), loose-laid with staggered joints		
	Eligible Products:	By	Product	Min. Thickness
		Seaman	FTR-Value, FTR-Value A or FTR-Value H	38-mm (1.5-inch)
		Atlas Roofing	ACFoam II	
		Hunter Panels	H-Shield	
		IKO Industries	IKOTerm or IKOTerm III	
		Johns Manville	ENERGY 3	
		Lexsuco	ISOLEX A	
		FRANSYL	IZOLON (min. 1.0 pcf)	

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PRODUCTS/APPLICATION (CONTINUED):

Vapour Barrier:	Description:	Min. 6-mil polyethylene, VaporTite, LexShield Air/Vapour Barrier Membrane or Permaste Stick or other vapor barrier
	Application:	Loose-laid, adhered or mechanically-fixed
	Eligible Products:	Any approved product acceptable to the named customer and the Authority Having Jurisdiction
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-Load:	The base sheet fastener point-loads resisted during this test are: <ul style="list-style-type: none"> • Test Value: 1034 N (233 lbf) • Design Value: 672 N (151 lbf) 	

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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:
2020-01-10	FINAL	After customer review	RN
2020-02-04	DRAFT REV1	For customer review; add Lexcuso components	RN
2020-02-04	REV1	After customer review	RN
2021-10-20	REV2	Add DEXcell FA Glass Mat Roof Board; add Lexboard 90; add Permasteel	RN
2022-07-25	DRAFT REV 3	For customer review; add results from 4i-SMN-22-SSCRT-01 and -02, add IKOTerm	RN
2022-08-29	REV3	After customer review	RN
2025-07-03	REV4	Re-Validation, reformat	RN

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END OF REPORT