



NEMO|etc.

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ENGINEER

TEST

CONSULT

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

CUSTOMER:	Amrize Building Envelope LLC (Duro-Last)	TEST DATE:	2022-02-09
DOCUMENT NO.	DL-MARS-16.1	PUBLICATION DATE:	2025-07-11
TEST PANEL NO.	DL-D5	REVISION NO.	2
SYSTEM TYPE:	C-2	REEVALUATION DATE:	2028-07-10

MECHANICALLY ATTACHED ROOFING SYSTEM (MARS) SUMMARY

ROOFING SYSTEM SUMMARY:

Roof Cover:	PVC or KEE/PVC co-polymer single ply, induction welded
Coverboard:	Oriented strand board (OSB), adhesive-applied
Insulation:	Expanded polystyrene (EPS), adhesive-applied
Vapor Barrier:	SBS modified bitumen membrane with trilaminate woven polyethylene top surface, self-adhering
Deck:	Structural concrete

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
-2,9	-60	-1,9	-39	-1,9	-40

PRODUCTS / APPLICATION:

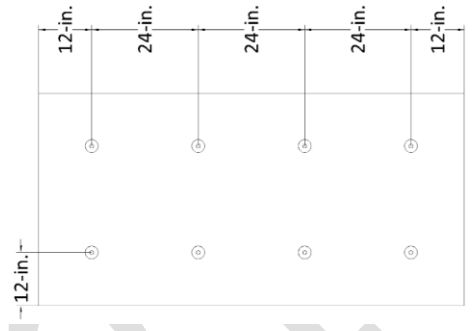
Roof Cover:	Description:	Membrane composed of polyester reinforcement coated with PVC or KEE/PVC co-polymer compound			
	Application:	Induction welded			
	Eligible Products:	Duro-Last (min. nominal 40-mil), Duro-Last EV (min. nominal 50-mil) or Duro-Tuff (min. nominal 50-mil)			
Coverboard:	Description:	Oriented strand board (OSB)			
	Application:	Adhesive-applied			
	Eligible Products:	Product			Min. Thickness
Coverboard Adhesive:	Description:	Polyurethane based insulation adhesive			
	Application:	Continuous ribbons, 305-mm (12-inch) on-center			
	Eligible Products:	By		Product	
		Amrize:	Duro-Grip WeatherTite One Step		
H.B. Fuller Company:	Millennium One Step Foamable Adhesive				

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PRODUCTS/APPLICATION (CONTINUED):				
Fasteners for Induction Welding: <i>(Fasteners do not engage the roof deck).</i>	Description:	Corrosion resistant screw-type roofing fasteners with steel stress plates coated with proprietary coating		
	Fastening Method:	Fasteners installed through stress plates <u>to engage the adhered OSB coverboard</u>		
	Fastening Rate:	1 part per 0.37 m ² (4 ft ²) 0.61 x 0.61 m (2 x 2 ft) grid		
	Eligible Products:	2-in. long Duro-Last #15 EHD Drill Point Fasteners with plate options noted below		
		Membrane	Thickness	Stress Plate Options
Duro-Last		Min. 40-mil	Duro-Bond Plate 1302 or Duro-Bond PVC IW Plate	
Duro-Last		Min. 60-mil	Duro-Bond ISO WELD 1302-1	
Duro-Last EV	Min. 50-mil	Duro-Bond Plate 1302, Duro-Bond ISO WELD 1302-1 or Duro-Bond PVC IW Plate		
Duro-Tuff	Min. 50-mil	Duro-Bond Plate 1302, Duro-Bond ISO WELD 1302-1 or Duro-Bond PVC IW Plate		
Insulation:	Description:	Expanded polystyrene (EPS) board		
	Application:	Two (2) or more layers with staggered joints, adhesive-applied		
	Eligible Products:	By	Product	
Insulation Adhesive:	Description:	Polyurethane based insulation adhesive		
	Application:	Continuous ribbons, 305-mm (12-inch) on-center		
	Eligible Products:	By	Product	
		Amrize:	Duro-Grip WeatherTite One Step	
H.B. Fuller Company:	Millennium One Step Foamable Adhesive			
Vapour Barrier:	Description:	SBS modified bitumen membrane with trilaminate woven polyethylene top surface		
	Application:	Self-adhering		
	Eligible Products:	Duro-Last Vapor Barrier		
Primer:	Description:	Solvent-based, synthetic rubber primer		
	Application:	~0.5 gal/square		
	Eligible Products:	Duro-Last VB Primer		
Deck:	Tested Product:	Min. 2,500 psi structural concrete		



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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 a simulated structural concrete deck. Alternate deck displaying equivalent strength may be specified at the discretion of the Designer of Record to the satisfaction of the Authority Having Jurisdiction.		
Fastener Point-Loads:	Induction Weld Fastener Point-Load		
	Sustained Test Value		Design Value
	N	lbf	N
	1068	240	694
			156

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:
2022-02-22	FINAL	None	RN
2025-03-04	REV1	Re-Validation	RN
2025-07-11	REV2	Re-Validation, reformat	RN

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END OF REPORT