VANCOUVER, BC: 877.461.8378 ph. | 604.527.8368 fx.
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DOCUMENT:	Internal Review Checklist	PROJECT MANAGER	Matt Lansdowne, P.Eng.
PRODUCT TYPE:	Rundle Shake, Rundle Slate, Beaumont Shake, Beaumont Shake HP, Vermont Slate Loc, Vermont Slate Loc HP composite roofing coverings.	REVIEWER:	Kent Adamson
CLIENT:	Global Environmental Manufacturing (GEM) Inc. dba Euroshield.	DATE:	December 20, 2025

ADMINISTRATIVE REVIEW:

DOCUMENT	DOCUMENT NAME	REVIEWED (Y/N)	DOCUMENT WITH DATE
1.0	QAI Quote	Y	See Application for CER signed by Henry Kamphuis June 9, 2022. Free transfer, no quote issued.
2.0	Manufacturer's Installation Instructions	Y	Reviewed by QAI ML July - August 2022.
3.0	Product Label	Y	See CER_{US}-1013 and QAI Follow Up Inspection Procedure (FIP) on file with QAI.
4.0	Application for Listing	Y	See Application for CER signed by Henry Kamphuis June 9, 2022.
5.0	Certification Application	Y	Listing Agreement signed February 13, 2019 by Brian Eberle of G.E.M. Inc.
6.0	Manufacturer / Listee Agreement	Y	N/A as product is manufactured by G.E.M. Inc.
7.0	Manufacturer Website / Online Product Info	Y	Reviewed by QAI ML July / August 2022.

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TECHNICAL REVIEW:

DOCUMENT	DOCUMENT NAME	REVIEWED (Y/N)	DOCUMENT WITH DATE
8.0	GENERAL	N/A	N/A
8.1	**ICC-ES AC07**		
	Weathering ASTM G155	Y	See test summary RJ4889-E1 outlining compliance to ICC-ES AC07 for the items described. Evaluation of the GEM product formulation, found the formulation to comply with durability, flammability and retention requirements for use as outlined in ICC-ES AC07 for use under the IBC / IRC. GEM has submitted affidavit outlining product complies for use in applications limited to 130 mph maximum ultimate design wind speed areas, for roof heights of 40 ft or less Exposure B structures, in accordance with ICC-ES AC07 requirements. Product is intended for use on slopes of 4:12 to 20:12. See ICC-ES ESR-3488 on file with QAI outlining compliance of the noted GEM products. The formulation evaluated per QAI project RJ4889-E1 is consistent for all product types evaluated in CERus-1013. Review of 2024 IBC, requirements remain consistent (ML 25/03/2024). 2023 FBC Update: See Creek Technical Services, LLC Evaluation Report GEM15001.2 dated June 9, 2021. Noted evaluation is sealed by FL P.E. Zachary Priest, 2021.06.09. Document outlines the following allowable uplift pressures: 1. Beaumont Shake: -180 psf allowable where installed with 18 nails (2 rows of 9) 0.120-inch ring shank roofing nails with 3/8'' diameter head. 2. Rundle Slate / Rundle Shake: -75 psf allowable where installed with 7 nails at 12'' above exposed edge at pre-marked locations with 0.120-inch ring shank roofing nails with 3/8'' diameter head. 3. Rundle Slate / Rundle Shake: -172.5 psf allowable where installed with 16 at 11'' above exposed edge at pre-marked locations with 0.120-inch ring shank roofing nails with 3/8'' diameter head.
	Tensile Strength Loss ASTM D638		
	Rate of Burning ASTM D635		
	Spontaneous Ignition Temperature ASTM D1929		
	Uplift Bend per ICC-ES AC07		
	Temperature Cycling per ICC-ES AC07		
	Wind Uplift Resistance		

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			Edition 3 Update: Product addition of Beaumont Shake HP and Vermont Slate Loc HP into QAI CERus-1013. This addition is justified for material and system performance for water protection and weathering, as noted products are of increased thickness, but remain of identical formulation to previously evaluated GEM products, as outlined in the approved Quality Control documentation referenced in this checklist. Beaumont Shake HP and Vermont Slate Loc HP are not approved for use in roof-fire classified assemblies, as the noted HP products represent increased fuel load, and thus require testing for ensuring ongoing compliance with CERus-1013.
8.2	**Roof-Fire Classified Assemblies:** ASTM E108	Y	See QAI test reports: • RJ6888F-1 dated April 18, 2019 for Beaumont Shake Class C assemblies. • RJ4414F-1Rev.1 dated January 5, 2017 for Rundle Shake and Rundle Slate (formerly Harvest Shake and Harvest Slate) Class C assemblies. • See QAI evaluation T1065-13 dated April 25, 2019 approved Vermont Slate as equivalent to tested Beaumont Shake for use in Class C assemblies. Approved Class C assemblies are outlined in Table 2 of CERus-1013. Review of 2024 IBC, requirements remain consistent (ML 25/03/2024).

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DOCUMENT	DOCUMENT NAME	REVIEWED (Y/N)	DOCUMENT WITH DATE
8.3	**Hail-Impact Resistance:**	Y	See test reports: • R16053.01.2017c dated May 21, 2012 by SwRI for Rundle Shake (formerly Euroshake / Harvest Shake) showing Class IV compliance. • R16053.01.2017d dated May 21, 2012 by SwRI for Rundle Slate (formerly Euroslate / Harvest Shake) showing Class IV compliance. • RJ6888P-1 dated April 3, 2019 for Beaumont Shake products showing Class IV compliance. • See QAI evaluation T1065-13 dated April 25, 2019 approved Vermont Slate as equivalent to tested Beaumont Shake for use in Class IV impact resistant assemblies. • Beaumont Shake HP and Vermont Slate Loc HP considered Class IV resistance, as these noted products are of the same profile shape and formulation, with increased product thickness, providing greater resistance to impact and hail to evaluated standard Beaumont Shake and Vermont Slate Loc options. Impact requirements for roofing > 2:12 not outlined in the applicable code, as such, UL 2218 is used as evidence of hail impact resistant, where code does not specify.
8.4	**High Velocity Hurricane Zones per FBC 2022** ***Plastics Testing*** ASTM G155 4500 Hours Tensile Strength > 90% after ASTM G155 Rate of Burning ASTM D635 Spontaneous Ignition Temperature ASTM D1929 Smoke Density ASTM D2843 ***Roof Covering Testing*** Wind Driven Rain TAS 100 Wind Uplift	N/A	Review was conducted and it was found products do not comply with ASTM E108 Class A or Class B requirements as required for HVHZ applications.

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9.0	Type I-IV Construction ASTM E108	N/A	Product complies for use in Types I-IV construction where Class C roof classified assemblies are specified.

QUALITY CONTROL REVIEW:

DOCUMENT	DOCUMENT NAME	REVIEWED (Y/N)	DOCUMENT WITH DATE
10.0	Quality Control Manual FIP	Y	G.E.M. Inc. dba Euroshield is QAI certification client outlined in QAI listing B1092. QAI performs on going factory surveillance at the location of manufacture in Calgary, AB with ICC-ES AC10 compliant quality documentation maintained on file at QAI in the client certification file. See Quality Documentation QGEM-001Rev9 on file at QAI.

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BUILDING CODE CROSS CHECK:

CATEGORY:	DESCRIPTION METHOD	IBC	IRC
General	ICC-ES AC07 Review. Product is not prescriptive by code, but meets performance criteria for durability	1504 2024, 2021, 2018, 2015	No requirements per IRC. QAI considers compliance with IBC intent to show compliance for use under IRC applications
	Plastics Rate of Burning ASTM D635	2606.4 (for light transmitting plastics, while not required for roof coverings, applied for additional safety considerations)	No requirements per IRC. QAI considers compliance with IBC intent to show compliance for use under IRC applications.
	Plastics Spontaneous Ignition Temperature ASTM D1929	2606.4 (for light transmitting plastics, while not required for roof coverings, applied for additional safety considerations)	No requirements per IRC. QAI considers compliance with IBC intent to show compliance for use under IRC applications.
Structural	Wind Uplift	GEM has submitted affidavit of wind resistance for installations as outlined in areas of maximum 130 mph (209 km/h) basic design wind speed (V), or ultimate (maximum) design wind speed (V_{Ult}) on structures of maximum 40 ft (12.2 m) height Exposure Category B per ICC-ES AC07 allowance.	No requirements per IRC. QAI considers compliance with IBC intent to show compliance for use under IRC applications

Fire Classification	Roof Fire Classification	1505.1 FBC 1516 (HVHZ) (not sought)	R902.1
Additional	Hail Impact	N/A Referenced by Texas Department of Insurance and other AHJ, so included for information purposes.	
High Velocity Hurricane Zones	Roof Coverings for Use in HVHZ	Does not comply at this time	Does not comply at this time

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CONCLUSIONS

Based on review of the above information, the below have confirmed G.E.M. Inc. dba Euroshield Rundle Slate, Rundle Shake, Beaumont Shake, Beaumont Shake HP, Vermont Slate Loc and Vermont Slate Loc HP products have met the intent of the IBC 2024/2021/2018/2015, IRC 2024/20212018/2015, 2023/2020 FBC (not included HVHZ) for applications as outlined in CER$_{US}$-1013 revised April 2025.

Signed on behalf of QAI:

Matt Lansdowne, P.Eng.
VP of Engineering

Kent Adamson
President

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