

ICC-ES Evaluation Report

ESR-5502

Issued July 2026

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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION Section: 07 56 00 – Fluid – Applied Roofing	REPORT HOLDER: IGOE INTERNATIONAL LTD.	EVALUATION SUBJECT: LAVA 20 WATERPROOFING SYSTEM	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021 and 2018 *International Building Code*® (IBC)
- 2024, 2021 and 2018 *International Residential Code*® (IRC)

Properties evaluated:

- Physical properties
- Fire classification
- Wind resistance
- Impact resistance

2.0 USES

The Lava 20 Waterproofing System described in this evaluation report is used in the construction of classified roof coverings as specified in [Table 1](#). The roof covering system described in this report may be used on buildings of any type of construction.

3.0 DESCRIPTION

3.1 General:

The Lava 20 Waterproofing System consists of Lava 20 coating and Lava 20 fast primer described in Section 3.2

3.2 Lava 20 Waterproofing System:

3.2.1 Lava 20 coating: Lava 20 coating is a single-component, liquid- applied elastomeric acrylic roof coating complying with ASTM D6083, Type I. Lava 20 coating has a shelf life of 12 months when stored in factory-sealed containers at temperatures between 32°F and 95°F (0°C and 35°C). Lava 20 coating is available in a white and light grey color.

3.2.2 Lava 20 Fast Primer: Lava 20 Fast Primer is a single-component, transparent, fast curing polyurethane solvent based primer. Lava 20 Fast Primer has a shelf life of 12 months when stored in factory-sealed containers at temperatures between 41°F and 95°F (5°C and 35°C).

3.3 Impact Resistance:

The Lava 20 Waterproofing System described in this report meets the requirements of the Resistance to Foot Traffic Test described in Section 4.6 of FM 4470, as referenced in 2024 and 2018 IBC Section 1504.7 (2021 IBC Section 1504.8).

4.0 INSTALLATION

4.1 Preparation of Substrates:

The substrate to be covered must be free of grease, oil, loose particles, moisture or any other substance that might interfere with the bond between coating and the substrate. Primers, if required by the installation instructions, must be in accordance with the instructions.

4.2 Roof Deck Substrates - Concrete Substrate: Structural concrete substrates must have a minimum compressive strength (f_c) of 2500 psi (17.2 MPa).

4.3 Roof Slopes:

The roofing systems must be applied to provide a minimum slope of $1/4:12$ (2 percent) and a maximum slope as specified in [Table 1](#).

4.4 Application:

The Lava 20 coating must be applied over the roof deck using a roller, brush, squeegee or airless spray equipment designed for use with coatings. The coating must be applied in one coat at the wet film thickness and application rate specified in [Table 1](#). The ambient temperature during application must be a minimum of 41°F (5°C) and a maximum of 95°F (35°C). The coating must be allowed to cure in accordance with the report holder's installation instructions.

4.5 Fire Classification:

4.5.1 New Construction:

The roof covering system specified in [Table 1](#) is a Class A classified roof covering system in accordance with ASTM E108 (UL790).

4.5.2 Reroofing:

Prior to installation of the new roof coating, the existing roof system must be removed from the concrete roof deck or steel roof deck, as applicable. Inspection in accordance with 2024 and 2021 IBC Section 1512 (2018 IBC Section 1511) and approval from the code official having jurisdiction are required. Installation must be over an uninsulated concrete deck only or an uninsulated steel roof deck only.

4.6 Wind Resistance:

The allowable wind uplift pressures for the Lava 20 Waterproofing System recognized in this report are limited to that permitted by the code for the roof deck and structural framing, except as noted in [Table 2](#).

5.0 CONDITIONS OF USE:

The Lava 20 Waterproofing System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation of the roofing system must comply with the applicable code, the report holder's published installation instructions, and this report. If there are any conflicts between the report holder's installation instructions and this report, this report governs.
- 5.2 Where moderate or heavy foot traffic occurs for maintenance of equipment, or is otherwise necessary, the roof covering system must be adequately protected to prevent rupture or wearing of the surface.
- 5.3 The allowable wind uplift pressures listed in [Table 2](#) are for the roof coverings only. The deck and supporting structure to which the roof covering is attached must be designed to withstand the applicable wind pressure determined in accordance with ASCE 7 or IBC Section 1609.
- 5.4 When application is over existing roofs, documentation of wind-uplift resistance of the composite roof construction must be submitted to the code official for approval at the time of permit application.
- 5.5 Flashing, when required, must be installed in accordance with IBC Section 1503.2.

- 6.6 The Lava 20 Waterproofing System is manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of testing in accordance with ASTM D6083.
- 6.2 Reports of tensile strength testing of the coating both before and after accelerated weathering in accordance with 2021 IBC Section 1504.7 (2018 IBC Section 1504.6).
- 6.3 Reports of "Resistance to Foot Traffic Test" in accordance with Section 4.6 of FM 4470.
- 6.4 Report of roof classification tests in accordance with ASTM E108 (UL790).
- 6.5 Reports of wind uplift resistance tests in accordance with FM 4470.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5502) along with the name, registered trademark, or registered logo of the report holder [IGOE International Ltd.] must be included in the product label.
- 7.2 In addition, each container of Lava 20 coating and Lava 20 Fast Primer is labeled with the product name, batch number, quantity of material in packaged mix, storage instructions and shelf life and expiration date.
- 7.3 The report holder's contact information is the following:

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TABLE 1 — FIRE CLASSIFICATION — FLUID APPLIED ROOFING SYSTEM

SYSTEM NO.	FIRE CLASSIFICATION	ROOF DECK SUBSTRATE ¹	MAX. ROOF SLOPE	COATING
1	A	Noncombustible	2:12	Lava 20 coating applied at 95 wet mils thick in one coat at a rate of 5.94 gal/100 ft ²

For SI: 1 inch = 25.4 mm; 1 mil = 0.0254 mm

¹Roof deck substrate must be concrete with a minimum compressive strength of 2500 psi, as specified in Section 4.2.

TABLE 2 — WIND RESISTANCE OF FLUID APPLIED ROOFING SYSTEM

SYSTEM NO.	ROOD DECK	COATINGS		ALLOWABLE UPLIFT CAPACITY (psf)
		Base Coat	Surface Coat	
1	Concrete	Lava 20 Fast Primer applied at 3 to 5 wet mils thick applied in one coat at a rate of 0.19 to 0.31 gal/100 ft ²	Lava 20 coating applied at 95 wet mils thick in one coat at a rate of 5.94 gal/100 ft ²	503
2	Concrete	---	Lava 20 coating applied at 95 wet mils thick in one coat at a rate of 5.94 gal/100 ft ²	503

For SI: 1 inch = 25.4 mm; 1 mil = 0.0254 mm

¹Roof deck substrate must be either concrete with a minimum compressive strength of 2500 psi as specified in Section 4.2.