

Dynamic Wind Uplift Resistance CSA A123.21-2014 – Summary Document

Document No.: 20-06-B0113-MARS010-A
Document Date: May 7, 2021

Reference Documentation:

CSA A123.21-2014 Report No: 20-06-B0113-2
Supplementary Report No.: 19-06-B0042-M RV2

| | | | |
|----------------------|---------------------------|--|-----------------------------------|
| Manufacturer: | IKO Industries Ltd. |  | IKO System Identification: |
| | 40 Hansen Road South | | |
| | Brampton, Ontario, Canada | | |
| | L6W 3H4 | | MARS010 |

SECTION 1.0: Roof System Summary:

| "IKO INNOVI™ TPO MA @ 12" o.c. OPTIONAL VR (8 ft SHEET WIDTH) – Mechanically Attached Roofing System | |
|---|--|
| Roof Membrane – Cap Sheet: | IKO Innovati TPO – 45 mil |
| Insulation: | IKO IKOTherm™ |
| Insulation: | IKO IKOTherm™ |
| Deck: | Steel Deck, 22 ga, RD938, 230 MPa (33.4 ksi) |

SECTION 2.0: System Dynamic Uplift Resistance (DUR) Testing Details:

| Test Date | Dynamic Wind Uplift Resistance (DUR) of tested specimen kPa (psf) | Dynamic Wind Uplift Resistance (DUR)* Rating (with 1.5X safety factor) kPa (psf) |
|------------------|--|---|
| October 22, 2020 | 6.3 (131.3) | 4.2 (87.5) |

Dynamic Uplift Resistance Rating (DUR) 4.2 kPa (87.5 psf)

SECTION 3.0: Tested Product and Substitutable Products:

| Roof Membrane (Cap Sheet) | | |
|---------------------------|---|---------------------|
| Tested Product | IKO Innovi TPO – 45 mil | |
| Product Size | Roll Thickness: 1.14 mm (0.045"), Roll Width: 2.4 m (8'), Roll Length 30.5 m (100') | |
| Attachment Method | Seam welded and in-seam fastening – see securement section for details | |
| Substitutable Product(s) | | |
| Manufacturer | Product Identification | |
| IKO Industries Ltd. | Innovi TPO – 60 mil | Innovi TPO – 80 mil |

| Cover Board | | |
|--------------------------|--|------------------------|
| Tested Product | Optional layer | |
| Product Size | 12.7 x 1220 x 2440 mm (0.5" x 4' x 8') | |
| Attachment Method | Pre-secured – see pre-securement section for details | |
| Fastening Rate | n/a | |
| Substitutable Product(s) | | |
| Manufacturer | Product Identification | |
| IKO Industries Ltd. | IKOTherm CoverShield | |
| Georgia-Pacific® | DensDeck® | DensDeck Prime® |
| USG®/CGC | Securock® Glass-Mat | Securock® Gypsum-Fiber |

| Insulation (Top Layer) | | | |
|--------------------------|---|----------------------|-------------------------|
| Tested Product | IKO IKOTherm | | |
| Product Size | 38 x 1220 x 2440 mm (1.5" x 4' x 8') | | |
| Attachment Method | Pre-secured or loose laid with Cover Board – see pre-securement section for details | | |
| Fastening Rate | n/a | | |
| Substitutable Product(s) | | | |
| Manufacturer | Product Identification | | |
| IKO Industries Ltd. | IKOTherm III | IKOTherm 25 psi | IKOTherm III 25 psi |
| | IKOTherm Tapered | IKOTherm III Tapered | IKOTherm 25 psi Tapered |

| Insulation (Bottom Layer) | | | |
|---------------------------|--------------------------------------|----------------------|-------------------------|
| Tested Product | IKO IKOTherm | | |
| Product Size | 38 x 1220 x 2440 mm (1.5" x 4' x 8') | | |
| Attachment Method | Loose laid or pre-secured | | |
| Fastening Rate | n/a | | |
| Substitutable Product(s) | | | |
| Manufacturer | Product Identification | | |
| IKO Industries Ltd. | IKOTherm III | IKOTherm 25 psi | IKOTherm III 25 psi |
| | IKOTherm Tapered | IKOTherm III Tapered | IKOTherm 25 psi Tapered |

| Vapour Retarder | | |
|---------------------------------|--|---|
| Tested Product | Optional layer | |
| Product Size | n/a | |
| Attachment Method | Loose laid or self-adhered to substrate | |
| Fastening Rate | n/a | |
| Substitutable Product(s) | | |
| Manufacturer | Product Identification | |
| IKO Industries Ltd. | MVP | MVP Sand |
| | Armourbond Flash Sand | Armourgard Ice and Water Protector Commercial |
| | Armourgard Vapour Retarder | |
| Generic | Any IKO approved Kraft Paper or polyethylene vapour retarder | |

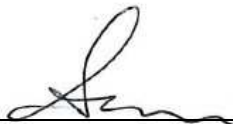
| Thermal Barrier | | |
|---------------------------------|--|------------------------|
| Tested Product | Optional layer | |
| Product Thickness | 12.7 x 1220 x 2440 mm (1/2" x 4' x 8') | |
| Attachment Method | Loose laid or pre-secured | |
| Fastening Rate | n/a | |
| Substitutable Product(s) | | |
| Manufacturer | Product Identification | |
| Georgia-Pacific® | DensDeck® | DensDeck Prime® |
| USG®/CGC | Securock® Glass-Mat | Securock® Gypsum-Fiber |
| Generic | Any IKO approved Gypsum Board meeting the requirements of ASTM C1177 or ASTM C1278 | |

| Membrane Securement | |
|---------------------------------|--|
| Tested Product | InnoviFast™ #15 Heavy Duty (HD) Fastener with InnoviFast 60 mm (2-3/8") HD Seam Plate (barbed) |
| Fastener Spacing | 305 mm (12") o.c. (in seam) |
| Row Spacing | 2.29 m (7.5 ft) o.c. (in seam) |
| Substitutable Product(s) | |
| Manufacturer | Product Identification |
| SFS - Dekfast™ | #15 (DF-#15-PH3) Fastener with 2-3/8" (60 mm) Round Barbed Stress Plate (PLT-R-2-3/8-6B) |
| Trufast® | #15 EHD Roofing Fastener with 2.4" (60 mm) Round Barbed Metal Seam Plate (MPB-2400) |
| OMG® | #15 Extra Heavy Duty Roofing Fastener with 2-3/8" (60 mm) Round Barbed Plate (SPGA238B) |

| Insulation/Cover Board Pre-securement | |
|---------------------------------------|---|
| Tested Product | IKO InnoviFast™ #12 Insulation Fastener with InnoviFast 76 mm (3") Round Insulation Plate |
| Fastening Rate | Minimum 1 per 6.4 ft ² (0.60 m ²), Five (5) per 12.7 x 1220 x 2440 mm (1/2" x 4' x 8') |
| Substitutional Product(s) | |
| Manufacturer | Product Identification |
| Trufast® | #12 DP Roofing Fastener with 3" (76 mm) Round Metal Insulation Plate (MP-3000) |
| SFS - Dekfast™ | #12 (DF-#12-PH3) Fastener with 3" (76 mm) Round Metal Insulation Plate (PLT-R-3) |
| OMG® | #12 Standard RoofGrip Drill Point Fastener with 3" (76 mm) Round Galv. Plate (SPGA3C) |

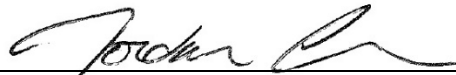
Note: This is not a comprehensive report but a summary of the performance results produced for the roof assembly documented herein tested in accordance to CSA A123.21-2014. Please refer to the reference documents stated on page 1 for detailed information pertaining to the test specimen configuration and construction.

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