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# Dynamic Wind Uplift Resistance CSA A123.21-2020 – Summary Document

Document No.: 21-06-B0043-AARS024-A September 10, 2021

Reference Documentation:

CSA A123.21-2014 Report No: 21-06-B0043-4 Supplementary Report No.: 19-06-B0042-M RV2

| Manufacturer: | IKO Industries Ltd.       | ® | IKO System Identification: |
|---------------|---------------------------|---|----------------------------|
|               | 40 Hansen Road South      |   | iko system identinication. |
|               | Brampton, Ontario, Canada |   | AARS024                    |
|               | L6W 3H4                   |   | AANSU24                    |

#### **SECTION 1.0: Roof System Summary:**

| "IKO MOD-BIT ADHERED GYPSUM COVER BOARD" – Adhesive Adhered Roofing System |  |  |
|--|--|--|
| Roof Membrane – Cap Sheet:   | IKO ArmourStick HD-Cap                       |  |
| Roof Membrane – Base Sheet   | IKO ArmourStick HD-Base                      |  |
| Cover Board:   | Georgia-Pacific DensDeck® Prime              |  |
| Insulation:  | IKO IKOTherm™                                |  |
| Insulation:  | IKO IKOTherm™                                |  |
| Vapour Retarder:   | IKO MVP™ Vapour Retarder                     |  |
| Thermal Barrier:   | Georgia-Pacific DensDeck® Prime              |  |
| Deck:  | Steel Deck, 22 ga, RD938, 230 MPa (33.4 ksi) |  |

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

| Test Date     | Dynamic Wind Uplift Resistance (DUR)<br>of tested specimen<br>kPa (psf) | Dynamic Wind Uplift Resistance (DUR)* Rating (with 1.5X safety factor) kPa (psf) |
|---------------|---|--|
| July 21, 2021 | 8.8 (183.8)   | 5.9 (122.5)  |

Dynamic Wind Uplift Resistance Rating (DUR): 5.9 Pa (122.5 psf)

## **SECTION 3.0: Tested Product and Substitutable Products:**

| Roof Membrane (Cap Sheet) |                                     |                                     |                           |  |
|---------------------------|-------------------------------------|-------------------------------------|---------------------------|--|
| Tested Product            | IKO ArmourStick HD-Cap              |                                     |                           |  |
| Product Size              | Roll Width 1 m (39.6"), Roll Length | 8 m (26.2'), 4.5 mm (0.18" Thick) v | with 90 mm (3.5") Overlap |  |
| Attachment Method         | Self-adhered to base sheet          | Self-adhered to base sheet          |                           |  |
| Substitutable Product(s)  |                                     |                                     |                           |  |
| Manufacturer              | Product Identification              |                                     |                           |  |
| IKO Industries Ltd.       | ArmourStick PrevENt                 |                                     |                           |  |
|                           | Torchflex TP-180-Cap                | Torchflex TP-HD-Cap                 | Torchflex TP-250-Cap      |  |
| IVO Industrias I td       | Torchflex TP-250-Cap (5 mm)         | PrevENt TP-250-Cap                  | Torchflex Ultra TP-HD-Cap |  |
| IKO Industries Ltd.       | PrevENt TP-HD-Cap                   | PrevENt Premium TP-250-Cap          | ArmourCool Granular TP-HD |  |
|                           | PrevENt ArmourCool Granular TP      | PrevENt ArmourCool HD Cap           | Carrara ArmourCool HD     |  |
| IKO Industries Ltd.       | Modiflex MP-180-cap                 | Modiflex MP-250-cap                 | Modiflex MP-HD-cap        |  |
|                           | PrevENt MP-250-cap                  | PrevENt MP-HD-cap                   |                           |  |

| Roof Membrane (Base Sheet) |                                 |   |                               |
|----------------------------|---------------------------------|---|-------------------------------|
| Tested Product             | IKO ArmourStick HD-Base         |   |                               |
| Product Size               | Roll Width 1 m (39.6"), Roll Le | ength 10 m (33'), 2.5 mm (0.0984" Thio                    | ck) with 90 mm (3.5") Overlap |
| Attachment Method          | Self-adhered to substrate prim  | Self-adhered to substrate primed with IKO S.A.M. adhesive |                               |
| Substitutable Product(s)   |                                 |   |                               |
| Manufacturer               | Product Identification          |   |                               |
| 11/01 1 1 1 1 1 1 1        | Torchflex TF-95-SF-Base         | Torchflex TP-180-FF-Base                                  | Torchflex TP-180-SF-Base      |
| IKO Industries Ltd.        | Torchflex HD-FF-Base            |   |                               |
| IKO Industries Ltd.        | Modiflex MF-95-FS-Base          | Modiflex MF-95-SS-Base                                    | Modiflex MP-180-FS-Base       |
|                            | Modiflex MP-180-SS-Base         | Modiflex MP-180-FS-Base 3mm                               | Modiflex MP-HD-FS-Base        |
|                            | Modiflex MP-HD-SS-Base          |   |                               |

| Cover Board       |   |  |  |
|-------------------|---|--|--|
| Tested Product    | GP DensDeck Prime                           |  |  |
| Product Size      | 6.4 x 1220 x 2440 mm (1/4" x 4' x 8')       |  |  |
| Attachment Method | Ribbon adhered with IKO Millennium adhesive |  |  |
| Fastening Rate    | 305 mm (12") o.c.                           |  |  |
|                   | Substitutable Product(s)                    |  |  |
| Manufacturer      | Product Identification                      |  |  |
| n/a               | n/a   |  |  |

| Insulation (Top Layer) |   |                      |                         |
|------------------------|---|----------------------|-------------------------|
| Tested Product         | IKO IKOTherm                                |                      |                         |
| Product Size           | 38 x 1220 x 1220 mm (1.5" x 4' x            | (4')                 |                         |
| Attachment Method      | Ribbon adhered with IKO Millennium adhesive |                      |                         |
| Fastening Rate         | 305 mm (12") o.c.                           |                      |                         |
|                        | Substitutable Product(s)                    |                      |                         |
| Manufacturer           | Product Identification                      |                      |                         |
| IVO Industrias Ltd     | IKOTherm III                                | IKOTherm 25 psi      | IKOTherm III 25 psi     |
| IKO Industries Ltd.    | IKOTherm Tapered                            | IKOTherm III Tapered | IKOTherm 25 psi Tapered |

| Insulation (Bottom Layer) |   |                                      |                         |  |
|---------------------------|---|--------------------------------------|-------------------------|--|
| Tested Product            | IKO IKOTherm                                |                                      |                         |  |
| Product Size              | 38 x 1220 x 1220 mm (1.5" x 4' x            | 38 x 1220 x 1220 mm (1.5" x 4' x 4') |                         |  |
| Attachment Method         | Ribbon adhered with IKO Millennium adhesive |                                      |                         |  |
| Fastening Rate            | 305 mm (12") o.c.                           |                                      |                         |  |
|                           | Substitutable Product(s)                    |                                      |                         |  |
| Manufacturer              | Product Identification                      |                                      |                         |  |
| IVO Industrias Ltd        | IKOTherm III                                | IKOTherm 25 psi                      | IKOTherm III 25 psi     |  |
| IKO Industries Ltd.       | IKOTherm Tapered                            | IKOTherm III Tapered                 | IKOTherm 25 psi Tapered |  |

| Vapour Retarder          |   |   |  |
|--------------------------|---|---|--|
| Tested Product           | IKO MVP Vapour Retarder                                   |   |  |
| Product Size             | Roll Width 1 m (39.4"), Roll Length 32 m (105')           | Roll Width 1 m (39.4"), Roll Length 32 m (105') |  |
| Attachment Method        | Self-adhered to substrate primed with IKO S.A.M. adhesive |   |  |
| Fastening Rate           | n/a   |   |  |
| Substitutable Product(s) |   |   |  |
| Manufacturer             | Product Identification                                    |   |  |
| IKO Industries Ltd.      | MVP Sand  | Armourbond Flash Sand                           |  |

| Thermal Barrier          |   |  |
|--------------------------|---|--|
| Tested Product           | GP DensDeck Prime®                          |  |
| Product Size             | 12.7 x 1220 x 2440 mm (1/2" x 4' x 8')      |  |
| Attachment Method        | Ribbon adhered with IKO Millennium adhesive |  |
| Fastening Rate           | 305 mm (12") o.c.                           |  |
| Substitutable Product(s) |   |  |
| Manufacturer             | Product Identification                      |  |
| n/a                      | n/a   |  |



| Assembly Adhesive Securement |  |  |
|------------------------------|--|--|
| Tested Product               | IKO Millennium adhesive – ribbon adhered |  |
| Fastening Rate               | 305 mm (12") o.c.                        |  |
| Substitutional Product(s)    |  |  |
| Manufacturer                 | Product Identification                   |  |
| n/a                          | n/a                                      |  |

| Membrane Cap Sheet Securement |  |  |
|-------------------------------|--|--|
| Tested Product                | ArmourStick HD-Cap   |  |
| Attachment Method             | Self-adhered to base sheet                                       |  |
| Manufacturer                  | Substitute Product Attachment Method                             |  |
|                               | ArmourStick PrevENt self-adhered to base sheet                   |  |
| IKO Industries Ltd.           | Torchflex and TP cap sheets heat welded to base sheet            |  |
|                               | Modiflex and MP cap sheets mopped to base sheet with hot asphalt |  |

| Membrane Base Sheet Securement |  |
|--------------------------------|--|
| Tested Product                 | ArmourStick HD-Base  |
| Attachment Method              | Self-adhered to substrate primed with IKO S.A.M. adhesive  |
| Manufacturer                   | Substitute Product Attachment Method   |
| IKO Industries Ltd.            | Torchflex, SF and FF base sheets heat welded to substrate primed with IKO Mod-Bit Primer                     |
|                                | Modiflex, FS and SS base sheets mopped with hot asphalt to substrate primed with IKO Standard Asphalt Primer |

Note: This is not a comprehensive report but a <u>summary</u> of the performance results produced for the roof assembly documented herein tested in accordance to CSA A123.21-2020. Please refer to the reference documents stated on page 1, or consult the manufacturer, for detailed information pertaining to the test specimen configuration and construction.

Reported by:

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