

Environmental Product Declaration for:  
**KI Genius Architectural Wall**  
Steel/Glass Panel (QX/880610)



This Environmental Product Declaration (EPD), covering all life cycle stages, was prepared in conformity with ISO 14025, ISO 14044, and ISO 21930, and in accordance with the Earthsure Product Category Rule 30162403:2014 for Interior Wall Systems. PCR Review Chair Thomas Gloria, LCACP #2008-3. EPDs prepared under other programs may not be comparable.



SCS-EPD-03721 | EPD Valid: 11/9/2015 to 11/8/2020



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**Product:** Genius architectural walls are designed and manufactured offsite, then installed in the building, with a floor-to-ceiling vertical span and meet the requirements of the International Building Code. These interior walls are constructed using ecologically sound materials and manufacturing processes. The wall system integrates with workspaces, storage and accessories to create streamlined workstations, conference rooms, training rooms and more. They may be moved to another location without losing any performance characteristics. This EPD is for a combination steel and glass panel manufactured in Manitowoc, Wisconsin.

**Producer:** KI is a contract furniture company that manufactures innovative furniture and movable wall systems for educational, university, business and government markets.

#### Independent Verification

Independent verification of the declaration and data, according to ISO 14025: ☐ internal ☒ external

Verifier:

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LCACP#: 2008-3

| Summary of Life Cycle Impacts and Inventory<br>per m <sup>2</sup> -30 yr, meeting IBC requirements for interior walls |                                   |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Climate Change                                                                                                        | 240 kg CO <sub>2</sub> -eq        |
| Acidification                                                                                                         | 2.4 kg SO <sub>2</sub> -eq        |
| Eutrophication                                                                                                        | 0.77 kg N-eq                      |
| Ozone Depletion                                                                                                       | 1.6x10 <sup>-5</sup> kg CFC-11-eq |
| Photochemical Smog                                                                                                    | 22 kg O <sub>3</sub> -eq          |
| Ecotoxicity                                                                                                           | 1.1 CTUe                          |
| Human Health – Air                                                                                                    | 0.20 kg PM <sub>2.5</sub> -eq     |
| Primary Energy Consumption                                                                                            | 5,300 MJ non-renewable            |
|                                                                                                                       | 210 MJ renewable                  |
| Freshwater Consumption                                                                                                | 4,100 L                           |
| Waste Production                                                                                                      | 0.048 kg hazardous                |
|                                                                                                                       | 72 kg non-hazardous               |
| Material Resource Consumption                                                                                         | 240 kg non-renewable              |
|                                                                                                                       | 3.0 kg renewable                  |
| Land Use                                                                                                              | 43 m <sup>2</sup> -yr             |

## LIFE CYCLE IMPACT ASSESSMENT RESULTS

For one square meter of interior wall conforming to the International Building Code for thirty years, using TRACI 2.1 Life Cycle Indicators (CML in parentheses):

| Life Cycle Impact                                                                   |                    | Total                   | Stage I                 | Stage II                | Stage III | Stage IV:               | Units                                |
|-------------------------------------------------------------------------------------|--------------------|-------------------------|-------------------------|-------------------------|-----------|-------------------------|--------------------------------------|
|                                                                                     |                    |                         | Production              | Installation            | Use       | End of Life             |                                      |
|    | Climate Change     | 240                     | 200                     | 17                      | 0.00      | 29                      | kg CO <sub>2</sub> -eq               |
|                                                                                     |                    | (240)                   | (200)                   | (17)                    | (0.00)    | (30)                    | kg CO <sub>2</sub> -eq               |
|    | Acidification      | 2.4                     | 2.2                     | 0.12                    | 0.00      | 0.030                   | kg SO <sub>2</sub> -eq               |
|                                                                                     |                    | (2.5)                   | (2.4)                   | (0.10)                  | (0.00)    | (0.029)                 | kg SO <sub>2</sub> -eq               |
|    | Eutrophication     | 0.77                    | 0.39                    | 0.039                   | 0.00      | 0.33                    | kg N-eq                              |
|                                                                                     |                    | (0.40)                  | (0.24)                  | (0.028)                 | (0.00)    | (0.13)                  | kg PO <sub>4</sub> <sup>3-</sup> -eq |
|  | Ozone Depletion    | 1.6x10 <sup>-5</sup>    | 1.4x10 <sup>-5</sup>    | 2.1x10 <sup>-6</sup>    | 0.00      | 2.4x10 <sup>-7</sup>    | kg CFC-11-eq                         |
|                                                                                     |                    | (1.6x10 <sup>-5</sup> ) | (1.4x10 <sup>-5</sup> ) | (2.1x10 <sup>-6</sup> ) | (0.00)    | (2.4x10 <sup>-7</sup> ) | kg CFC-11-eq                         |
|  | Photochemical Smog | 22                      | 18                      | 3.0                     | 0.00      | 0.37                    | kg O <sub>3</sub> -eq                |
|                                                                                     |                    | (0.13)                  | (0.12)                  | (4.3x10 <sup>-3</sup> ) | (0.00)    | (7.2x10 <sup>-3</sup> ) | kg C <sub>2</sub> H <sub>4</sub> -eq |
|  | Ecotoxicity        | 1.1                     | 0.57                    | 0.50                    | 0.00      | 4.6x10 <sup>-3</sup>    | CTUe                                 |
|                                                                                     |                    | (0.90)                  | (0.80)                  | (0.027)                 | (0.00)    | (0.075)                 | kg 1,4-DCB-eq                        |
|  | Human Health- Air  | 0.20                    | 0.19                    | 8.6x10 <sup>-3</sup>    | 0.00      | 2.0x10 <sup>-3</sup>    | kg PM2.5-eq                          |

# LIFE CYCLE INVENTORY INFORMATION

For one square meter of interior wall conforming to the International Building Code for thirty years.

| Inventory Item                | Amount | Units            |
|-------------------------------|--------|------------------|
| Primary Energy Consumption    | 5,300  | MJ non-renewable |
|                               | 210    | MJ renewable     |
| Freshwater Consumption        | 4,100  | L                |
| Waste Production              | 0.048  | kg hazardous     |
|                               | 72     | kg non-hazardous |
| Material Resource Consumption | 240    | kg non-renewable |
|                               | 3.0    | kg renewable     |
| Land use                      | 43     | m² yr            |

# HAZARDOUS MATERIAL CONTENT

For one square meter of interior wall conforming to the International Building Code for thirty years  
(at least 0.1% using California DTSC Candidate Chemical List).

| Material                                 | CAS Number | Amount (%) |
|------------------------------------------|------------|------------|
| Aluminum                                 | 7429-90-5  | 24%        |
| Bisphenol A, Epichlorohydrin Epoxy Resin | 25036-25-3 | 0.39%      |
| Manganese                                | 7439-96-5  | 0.12%      |
| Titanium dioxide                         | 13463-67-7 | 0.39%      |
| Zinc                                     | 7440-66-6  | 0.89%      |

# ADDITIONAL ENVIRONMENTAL INFORMATION

For one square meter of interior wall conforming to the International Building Code for thirty years.

|                                                       |                                |
|-------------------------------------------------------|--------------------------------|
| VOC emissions per BIFMA X7.1                          | passed                         |
| Recycled content                                      | 22% (pre-consumer)             |
|                                                       | 9.2% (post-consumer)           |
| Recyclable content*                                   | 65%                            |
| Organization's use of environmental management system | ISO 9001                       |
| Other environmental certification programs            | level 2, Indoor Advantage Gold |

\*Recyclable portion based on steel and aluminum in the wall panel. Recycling facilities may not be available in all areas.



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