

Designation: E2129 – 10

### Standard Practice for Data Collection for Sustainability Assessment of Building Products<sup>1</sup>

This standard is issued under the fixed designation E2129; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\varepsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This practice covers a set of instructions for collecting data to be used in assessing the sustainability of building products for use in both commercial and residential buildings.

1.1.1 There are many features of a building that contribute to sustainability; one of them is the selection of products for use in a building. Other key features influencing sustainability include, but are not limited to: overall efficiency of the design of the building, the impact the building has on the habits of the occupants, and the impact the building has on the microclimate and macroclimate. This standard addresses sustainability issues related to building products. This standard does not address sustainability issues related to overall building design, site selection, building operations, or other features influencing sustainability.

1.1.2 While it is recommended that users rely on professional judgment informed by both environmental expertise and specific knowledge of the intended use of the product, this standard provides no instruction as to interpretation of the data obtained. Interpretation of the data obtained is the responsibility of the user of this standard.

1.1.3 This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This practice is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "standard" in the title means only that the document has been approved through the ASTM consensus process.

1.2 This standard is organized according to the Construction Specifications Institute's (CSI) MasterFormat<sup>2</sup> sections to promote consistency in the evaluation of building products.

1.2.1 CSI MasterFormat version 1995 is used to organize information in Table 2. Appendix X1 provides a cross reference comparison to CSI MasterFormat 2004.

1.3 This standard includes general, comprehensive data requirements. Depending upon the building product, certain data requirements may not apply given the unique characteristics of the product and the potential environmental impacts related to the intended use of the product. Depending upon the building product, certain data requirements may need to be added as appropriate to the unique characteristics of the product and the potential environmental impacts related to the intended use of the unique characteristics of the product and the potential environmental impacts related to the intended use of the product.

**1.4** This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

### 2. Referenced Documents

- 2.1 ASTM Standards:<sup>3</sup>
- C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- C989 Specification for Slag Cement for Use in Concrete and Mortars
- C1240 Specification for Silica Fume Used in Cementitious Mixtures
- D5359 Specification for Glass Cullet Recovered from Waste for Use in Manufacture of Glass Fiber
- D6400 Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities
- E631 Terminology of Building Constructions
- E1480 Terminology of Facility Management (Building-Related)
- E2114 Terminology for Sustainability Relative to the Performance of Buildings

 $<sup>^{\</sup>rm 1}$  This practice is under the jurisdiction of ASTM Committee E60 on Sustainability and is the direct responsibility of Subcommittee E60.01 on Buildings and Construction.

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<sup>&</sup>lt;sup>2</sup> The term "MasterFormat" and the MasterFormat logo are trademarks of The Construction Specifications Institute (CSI), 99 Canal Center Plaza, Suite 300, Alexandria VA 22314, http://www.csinet.org.

<sup>&</sup>lt;sup>3</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

## €2129 – 10

### TABLE 1 General Questions

|              | Question Yes or No   | N/A | U/K | Commonto |
|--------------|--|-----|-----|----------|
|              |  | N/A | U/K | Comments |
|              | I-GENERAL REQUIREMENTS   |     |     |          |
| 1.1          | <ul> <li>D-Materials (Product Feedstock)<br/>Have efforts (such as mining management, site restoration, and so forth) been made</li> </ul> |     |     |          |
| 1.1          | to minimize or avoid negative environmental impacts, or both, (such as impact to rare  |     |     |          |
|              | or endangered resources or species, releases of toxic chemicals or hazardous air   |     |     |          |
|              | • • • • • • • • • • • • • • • • • • •  |     |     |          |
|              | pollutants, and so forth) in obtaining raw materials for this product? If yes, describe<br>these efforts.                                  |     |     |          |
| 1.0          |  |     |     |          |
| 1.2          | Is the product a recycled content product? If YES, indicate what percentage of the   |     |     |          |
|              | product is recycled and differentiate between pre-consumer and post-consumer   |     |     |          |
| 1.0          | recycled content.  |     |     |          |
| 1.3          | If applicable, does the recycled content product contain the percentage of recovered   |     |     |          |
|              | materials recommended by the U.S. EPA's Comprehensive Procurement Guidelines?  |     |     |          |
| 1.4          | Is the product 100% recyclable? If NO, please indicate what percentage of the prod-  |     |     |          |
|              | uct is recyclable.   |     |     |          |
| 1.5          | Is the product a biobased product (i.e. agricultural or forestry material)? If YES,  |     |     |          |
|              | please indicate the source and biobased content percentage. If percentage refers to  |     |     |          |
|              | a component rather than the entire product, please specify.  |     |     |          |
| 1.6          | Is the product made from a renewable resource? If YES, indicate the renewable  |     |     |          |
|              | cycle time and what percentage of the product that resource represents.  |     |     |          |
| 1.7          | Does the product, in the specified condition of use, meet EPA's National Volatile Or-  |     |     |          |
|              | ganic Compound (VOC)?  |     |     |          |
| 1.8          | Does the product in the specified condition of use, meet the requirements of   |     |     |          |
|              | South Coast Air Quality Management District for content of VOCs?   |     |     |          |
|              | p. 2-Manufacturing   |     |     |          |
| 2.1          | Has the manufacturer taken steps to minimize the use of nonrenewable energy from   |     |     |          |
|              | the point at which raw materials are gathered to the point at which the final product is   |     |     |          |
|              | transported to the building site? If yes, describe these measures.   |     |     |          |
| 2.2          | Is any of the waste produced in making this product reclaimed on-site? If yes, what  |     |     |          |
|              | percentage of the waste is reclaimed? Of the waste that is not reclaimed on-site, how  |     |     |          |
|              | is that waste handled?   |     |     |          |
| 2.3          | Does the process for manufacturing this product avoid the use of listed substances   |     |     |          |
|              | above the levels that would require reporting under the U.S. EPA's Toxics Release In-  |     |     |          |
|              | ventory? If NO, indicate how much of each substance is released per unit of product.   |     |     |          |
| 2.4a         | Does the process for manufacturing the product avoid the addition of substances  |     |     |          |
|              | listed in the National Toxicology Program's Report on Carcinogens?   |     |     |          |
| 2.4b         | If substances listed in the National Toxicology Program's Report on Carcinogens are  |     |     |          |
|              | added directly in the manufacturing process or are reported by suppliers on Material   |     |     |          |
|              | Safety Data Sheets (MSDS), do the concentrations fall below levels required to be  |     |     |          |
|              | reported under federal regulations on the products' MSDS? If NO, indicate the  |     |     |          |
|              | substance, classification and concentration per unit of product.   |     |     |          |
| 2.5          | Have any recent improvements been made to limit negative environmental impacts   |     |     |          |
|              | relating to the manufacturing process? If YES, describe the benchmark against which  |     |     |          |
|              | the improvements are measured and the degree of improvement.   |     |     |          |
| 2.6          | If water is used during the production process, have water conservation or recycling   |     |     |          |
|              |  |     |     |          |
|              | age of the total water usage they address.   |     |     |          |
| 2.7          | Has the manufacturer undertaken any of the following actions? If yes, indicate when  |     |     |          |
|              | the action(s) was (were) taken and describe the benchmark against which the im-  |     |     |          |
|              | provements are measured and the degree of improvement.   |     |     |          |
| 2.7a         | Redesigned a production process to decrease greenhouse gas emissions?  |     |     |          |
| 2.7a<br>2.7b | Redesigned a production process to decrease greenhouse gas emissions?  |     |     |          |
| 2.7c         | Redesigned a production process to utilize less toxic materials?   |     |     |          |
| 2.70<br>2.7d | Substituted safer solvents in a production process?  |     |     |          |
| 2.7u<br>2.7e | Instituted more stringent dust controls?   |     |     |          |
| 2.7e<br>2.7f | Installed smoke-stack particulate collectors or gas scrubbers?   |     |     |          |
|              |  |     |     |          |
| 2.7g         | Installed or improved in-plant solid and toxic waste reduction programs?   |     |     |          |
| 2.8          | Does the manufacturing facility comply with or exceed applicable occupational,   |     |     |          |
|              | health, and safety requirements?   |     |     |          |
|              | p. 3-Operational Performance of Installed Product  |     |     |          |
| 3.1          | If applicable, does the product qualify for an EPA Energy Star Program rating or meet  |     |     |          |
|              | the energy efficiency recommendations of the DOE's Federal Energy Manage-  |     |     |          |
|              | ment Program?  |     |     |          |
| 3.2          | Describe the product's energy efficiency impacts.  |     |     |          |
| 3.3          | Describe routine maintenance procedures for the product.   |     |     |          |
| 3.4          | How long will the product last in the building if maintained properly with routine main-   |     |     |          |
|              | tenance procedures?  |     |     |          |
| 3.5          | Does the manufacturer provide detailed instructions with the product upon delivery to  |     |     |          |
|              | the job site for the proper use and maintenance required in order to ensure that this  |     |     |          |
|              | product will last this long?   |     |     |          |

product will last this long? Criterion No. 4–Indoor Environmental Quality<sup>A</sup> E2129 – 10

### TABLE 1 Continued

|              | Question  | Yes or No | N/A | U/K | Comments |
|--------------|---|-----------|-----|-----|----------|
| 4.1          | Is there any other information about how this product contributes to indoor                   |           |     |     |          |
|              | environmental quality (positively or negatively, e.g. acoustical properties, lighting,        |           |     |     |          |
|              | potential risks to workers during application, and so forth) that has not already been        |           |     |     |          |
|              | reported, but that sender of this questionnaire should know? If YES, describe. (If this       |           |     |     |          |
|              | product is not intended to be used in the indoor environment or to interface with the         |           |     |     |          |
|              | occupants, indicate N/A.)   |           |     |     |          |
| riterion No. | 5-Corporate Environmental Policy  |           |     |     |          |
| 5.1          | Does the manufacturer have a written environmental policy? If YES, indicate how the           |           |     |     |          |
|              | sender of this questionnaire could obtain a copy of this policy upon request.                 |           |     |     |          |
| 5.2          | Does the manufacturer have a reclamation program or any other program in place to             |           |     |     |          |
|              | facilitate the recycling or reuse of its product by accepting return of the product at the    |           |     |     |          |
|              | end of its useful life? If NO, comment on the environmental impact of the product as          |           |     |     |          |
|              | a waste material. If yes, comment on how much of the product is actually reused or            |           |     |     |          |
|              | recycled at the end of the product's useful life.   |           |     |     |          |
| 5.3          | Does the manufacturer have a program in place to reduce the amount of the                     |           |     |     |          |
|              | product's packaging? If YES, describe.  |           |     |     |          |
| 5.4          | Does the manufacturer have a program in place to facilitate the return, reuse,                |           |     |     |          |
|              | recycling, or composting of the product's packaging? If YES, describe.                        |           |     |     |          |
| 5.5          | Does the manufacturer provide information on the service life of the product or               |           |     |     |          |
|              | encourage the use of professional guidelines to determine the service life of the<br>product? |           |     |     |          |
| 5.6          | Does the manufacturer provide information regarding natural disaster mitigation, such         |           |     |     |          |
|              | as performance of the product during a natural disaster or appropriate response after         |           |     |     |          |
|              | a natural disaster?   |           |     |     |          |
| 5.7          | Is documentation available to support the product's environmental claims? If YES,             |           |     |     |          |
|              | please indicate how copies may be obtained upon request.                                      |           |     |     |          |
| 5.8          | Is there other information, for which you could provide objective evidence, about the         |           |     |     |          |
|              | environmental quality of the building product you offer that you would like taken into        |           |     |     |          |
|              | consideration? If YES, describe the information and indicate how copies of this               |           |     |     |          |
|              | evidence could be obtained upon request.  |           |     |     |          |

<sup>A</sup> Note that some of the questions under Criterion No. 1 (Materials [Product Feedstock]) refer to attributes of products, for example, toxicity, that pose concerns for indoor environmental quality as well. In the interest of avoiding repetition, those questions are not repeated here. Respondents are reminded to answer all questions in the general section of this questionnaire.

# (https://standards.iteh.ai)

### 2.2 ANSI Standards:<sup>4</sup>

ANSI A208.2 Medium Density Fiberboard

### 2.3 ASHRAE Standards:<sup>5</sup>

ASHRAE 90.1 Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings (State 566126a5-35) ASHRAE 62 Ventilation of Acceptable Indoor Air Quality ASHRAE 52–76 Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter

2.4 ASME Standards:<sup>6</sup>

ASME A112.18.1M-1989 Plumbing Fixture Fittings

2.5 *CSI Program:*<sup>7</sup> MasterFormat 2004 Edition

2.6 *DOE Program:*<sup>8</sup> Federal Energy Management Program

| 2.7 EPA Standards:                                      |
|---|
| Energy Star Program <sup>9</sup>                        |
| Comprehensive Procurement Guidelines <sup>10</sup>      |
| National Volatile Organic Compound (VOC) Emission       |
| 8 Standards <sup>10</sup> 0-804 ad7 5e50 fastm-e2129-10 |
| Toxics Release Inventory <sup>10</sup>                  |
| 2.8 HUD Standards: <sup>11</sup>                        |
| 24 CFR Pt. 3280 Manufactured Home Construction and      |
| Safety Standards  |
| 10 CFR 435 Voluntary Performance Standards for New      |
| Buildings   |
| 2.9 OSHA Standards: <sup>12</sup>                       |
| OSHA Regulations  |
| 2.10 NFRC Standards: <sup>13</sup>                      |
| NFRC 100 Procedure for Determining Fenestration Product |
| U-Factors   |
|   |
|   |

<sup>&</sup>lt;sup>4</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

<sup>&</sup>lt;sup>5</sup> Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329, http://www.ashrae.org.

<sup>&</sup>lt;sup>6</sup> Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, http://www.asme.org.

<sup>&</sup>lt;sup>7</sup> Available from The Construction Specifications Institute (CSI), 99 Canal Center Plaza, Suite 300, Alexandria VA 22314, http://www.csinet.org.

<sup>&</sup>lt;sup>8</sup> Available from U.S. Department of Energy (DOE), Energy Efficiency and Renewable Energy, Mail Stop EE-1, Department of Energy, Washington, DC 20585, http://www.eere.energy.gov.

<sup>&</sup>lt;sup>9</sup> Available from United States Environmental Protection Association (EPA), Climate Protection Partnerships Division ENERGY STAR Programs Hotline & Distribution (MS-6202J), 1200 Pennsylvania Ave., NW, Washington, DC 20460, http://www.epa.gov.

<sup>&</sup>lt;sup>10</sup> Available from United States Environmental Protection Agency (EPA), Ariel Rios Bldg., 1200 Pennsylvania Ave., NW, Washington, DC 20460, http:// www.epa.gov.

<sup>&</sup>lt;sup>11</sup> Available from U.S. Department of Housing and Urban Development (HUD), 451 7th Street S.W., Washington, DC 20410, http://www.hud.gov.

<sup>&</sup>lt;sup>12</sup> Available from Occupational Safety and Health Administration (OSHA), 200 Constitution Ave., NW, Washington, DC 20210, http://www.osha.gov.

<sup>&</sup>lt;sup>13</sup> Available from National Fenestration Rating Council (NFRC), 8484 Georgia Avenue, Suite 320 Silver Spring, MD 20910, http://www.nfrc.org.

#### € € 2129 – 10

### TABLE 2 Questions Related to Specific Building Products

|                     | TABLE 2 Questions Related t  | -         | NI/A |     | Critoria Catagony(iaa)   | Commante |
|---------------------|--|-----------|------|-----|--------------------------|----------|
|                     | Question   | Yes or No | N/A  | U/K | Criteria Category(ies)   | Comments |
| DIVISION<br>General | 2—SITE CONSTRUCTION  |           |      |     |                          |          |
| 2-A                 | Does the manufacturer facilitate ultimate deconstruction of buildings  |           |      |     | Materials                |          |
|                     | or building products, or both, (in which components are taken apart    |           |      |     | Manufacturing            |          |
|                     | for reuse) by, for example, designing products for disassembly? If     |           |      |     | Op. Performance          |          |
|                     | YES, describe the process.   |           |      |     | IEQ                      |          |
|                     |  |           |      |     | X Corp. Env. Policy      |          |
| 2-B                 | Does the product facilitate water treatment on site? If YES, describe  |           |      |     | Materials                |          |
|                     | the process and indicate the level of treatment.                       |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | X Op. Performance        |          |
|                     |  |           |      |     |                          |          |
| ovina               |  |           |      |     | X Corp. Env. Policy      |          |
| aving<br>2-C        | Does the manufacturer offer surfaces with high albedo reflectance?     |           |      |     | Materials                |          |
| 2-0                 | What is the albedo reflectance?  |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | X Op. Performance        |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 2-D                 | Does the manufacturer offer pervious paving materials for non-         |           |      |     | Materials                |          |
|                     | landscaped areas (roadways, surface parking, plazas, pathways)?        |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | X Op. Performance        |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
|                     | 3-CONCRETE   |           |      |     |                          |          |
| 3-A                 | Does the product meet the following standards, which refer to          |           |      |     | X Materials              |          |
|                     | recovered materials?   |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     |                          |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 3-A.1               | Specification C618 "Specification for Coal Fly Ash and Raw or Cal-     |           |      |     | X Materials              |          |
|                     | cined Natural Pozzolan for Use as a Mineral Admixture in Portland      |           |      |     | Manufacturing            |          |
|                     | Cement Concrete?"  |           |      |     | Op. Performance<br>IEQ   |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 3-A.2               | Specification C989 "Specification for Ground Granulated Blast Fur-     |           |      |     | X Materials              |          |
| 0 7.2               | nace Slag for use in Concrete and Mortars?"                            |           |      |     | Manufacturing            |          |
|                     | have blag for use in oblicitie and workers:                            |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 3-A.3               | Specification C1240 "Specification for Silica Fume for Use in Hydrau-  |           |      |     | X Materials              |          |
|                     | lic Cement, Concrete, and Mortar?"                                     |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
|                     | 4-MASONRY. teh.at/catalog/standards/sist/5b6126a5-                     |           |      |     | /c5e50f/astm-e212        |          |
| 4-A                 | Does the product meet the following standards, which refer to recov-   |           |      |     | X Materials              |          |
|                     | ered materials?  |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ<br>Corp. Env. Policy |          |
| 4-A.1               | Specification C989 "Specification for Ground Granulated Blast Fur-     |           |      |     | X Materials              |          |
| 77.1                | nace Slag for use in Concrete and Mortars?"                            |           |      |     | Manufacturing            |          |
|                     | have blag for use in oblicitie and monars:                             |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 4-A.2               | Specification C1240 "Specification for Silica Fume for Use in Hydrau-  |           |      |     | X Materials              |          |
|                     | lic Cement, Concrete, and Mortar?"                                     |           |      |     | Manufacturing            |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| IVISION             | 5—METALS   |           |      |     | -                        |          |
| 5-A                 | Does the product have a factory finish or can it be installed unfin-   |           |      |     | Materials                |          |
|                     | ished? If NO, describe recommended field finishing properties.         |           |      |     | X_Manufacturing          |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     | IEQ                      |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
| 5-B                 | If a finish does exist, can the finish be easily removed to facilitate |           |      |     | Materials                |          |
|                     | future recycling of the metal?   |           |      |     | X_Manufacturing          |          |
|                     |  |           |      |     | Op. Performance          |          |
|                     |  |           |      |     |                          |          |
|                     |  |           |      |     | Corp. Env. Policy        |          |
|                     | 6—WOOD AND PLASTICS  |           |      |     |                          |          |

 TABLE 2
 Continued

|   | TABLE 2  | Continued |     |     |  |          |
|---|--|-----------|-----|-----|--|----------|
|   | Question   | Yes or No | N/A | U/K | Criteria Category(ies)   | Comments |
| 6-A   | Is the wood that is used in the product harvested from forests that<br>have been managed for sustainability according to the guidelines of<br>a recognized certification program? If YES, indicate the name of<br>regulation and describe the primary aspects of sustainability that it<br>promotes. |           |     |     | X Materials<br>Manufacturing<br>Op. Performance<br>IEQ<br>Corp. Env. Policy                      |          |
| 6-B   | Is the product made from a species of wood that is naturally resistant<br>to damage associated with the conditions to which it is exposed? If<br>YES, indicate which definition of "naturally resistant" is used to make<br>this determination and indicate the name of the species.                 |           |     |     | X Materials<br>Manufacturing<br>Op. Performance<br>IEQ<br>Corp. Env. Policy                      |          |
| 6-C   | Has the wood been treated with a preservative? If YES, please indicate the preservative that was used and the standard (or standards) to which the wood was treated.   |           |     |     | Materials <u>X</u> Manufacturing <u>Op</u> . Performance <u>X</u> IEQ                            |          |
| 6-D   | Is the agricultural resource from which this product is made certified organically grown according to the standards of a recognized certification program? If YES, indicate the name of the certification program.   |           |     |     | Corp. Env. Policy<br>X Materials<br>Manufacturing<br>Op. Performance<br>IEQ<br>Corp. Env. Policy |          |
| 6-E   | Is the medium density fiberboard (MDF), or products made containing MDF, third party certified to comply with the formaldehyde emissions requirements in ANSI A208.2?  |           |     |     | Materials<br>XManufacturing<br>Op. Performance<br>XEQ<br>Corp. Env. Policy                       |          |
| 6-F   | Does the binder for plywood or particleboard, or both, meet the<br>Manufactured Home Construction and Safety Standards promulgated<br>by HUD 24 CFR Pt. 3280) for formaldehyde emissions?  |           |     |     | Materials<br>X Manufacturing<br>Op. Performance<br>X IEQ<br>Corp. Env. Policy                    |          |
| Plastics and<br>6-G                         | Plastic Composites<br>Are plastics marked to identify materials for recycling?   |           |     |     | <u>X</u> Materials<br><u>Manufacturing</u><br>Op. Performance                                    |          |
| 6-H   | Does the building product (or components of the product) meet the requirements of Specification D6400 "Standard Specification for Compostable Plastics?"   |           |     |     | Corp. Env. Policy<br>X Materials<br>Manufacturing<br>Op. Performance                             |          |
| DIVISION 7-                                 |  |           |     |     | Corp. Env. Policy  |          |
| Roofing<br>7-A<br>https://s<br>Sealants and | Is the roofing material a light color/high albedo material? If YES, what is the albedo reflectance?g/standards/sist/5b6126a5-  |           |     |     | Materials<br>Manufacturing 212<br>X_Op. Performance<br>IEQ<br>Corp. Env. Policy                  |          |
| 7-B   | Do caulking and sealant products come with detailed instructions for<br>proper application in order to minimize health concerns? If YES, indi-<br>cate how the sender of this questionnaire could obtain a copy of the<br>instructions.  |           |     |     | Materials<br>Manufacturing<br>Op. Performance<br>X_IEQ<br>Corp. Env. Policy                      |          |
| 7-C   | Is the sealant or caulking compound a low-odor, all-weather,<br>waterproof, and vapor-proof coating?   |           |     |     | Materials<br>Manufacturing<br>X Op. Performance<br>X IEQ<br>Corp. Env. Policy                    |          |
| nsulation<br>7-D                            | Does the fiberglass insulation product meet the requirements estab-<br>lished in Specification D5359 "Specification for Glass Cullet Recov-<br>ered from Waste for Use in Manufacture of Glass Fiber?"   |           |     |     | X Materials<br>Manufacturing<br>Op. Performance  |          |
| 7-E   | In which R-Values is the insulation product available?   |           |     |     | Corp. Env. Policy<br>Materials<br>Manufacturing<br>X.Op. Performance<br>IEQ<br>Corp. Env. Policy |          |
| DIVISION 8-<br>8-A                          | —DOORS AND WINDOWS<br>Is the energy efficiency of the windows, doors, or skylights deter-<br>mined in accordance with NFRC 100 (U Factor) and NFRC 200<br>(SHGC) by an accredited independent laboratory and labeled and<br>certified by the manufacturer?   |           |     |     | Materials<br>Manufacturing<br>X Op. Performance<br>IEQ<br>Corp. Env. Policy                      |          |

 TABLE 2
 Continued

|                     | TABLE 2  | Continued |     |     |   |          |
|---------------------|--|-----------|-----|-----|---|----------|
|                     | Question   | Yes or No | N/A | U/K | Criteria Category(ies)  | Comments |
| 8-B                 | What is the Visible Light Transmission Coefficient of the windows, doors, and skylights as determined according to NFRC 300?   |           |     |     | Materials<br>Manufacturing<br>Op. Performance<br>IEQ<br>Corp. Env. Policy     |          |
| DIVISION            | 9—FINISHES   |           |     |     | Colp. Env. Policy   |          |
| 9-A                 | Does the carpet product meet the requirements of a third party envi-<br>ronmental certification program? If YES, indicate the name of the<br>certification program.  |           |     |     | Materials<br>Manufacturing<br>Op. Performance<br>X_IEQ<br>Corp. Env. Policy   |          |
| 9-B                 | Does the manufacturer recommend the carpet product be aired out prior to installation? If YES, describe the process for airing out.  |           |     |     | Materials<br>Op. Performance<br>XIEQ<br>Corp. Env. Policy                     |          |
| Paints and          | Coatings   |           |     |     |   |          |
| 9-C                 | Does the finishing product contain plant-sourced oils and solids utiliz-<br>ing only natural or aliphatic solvents, or both?   |           |     |     | X Materials<br>Manufacturing<br>Op. Performance<br>X IEQ<br>Corp. Env. Policy |          |
| 9-D                 | Is the finish water-borne? If NO, indicate the solvent used.   |           |     |     | Materials Manufacturing Op. Performance X IEQ                                 |          |
|                     | 10—SPECIALTIES   |           |     |     | Corp. Env. Policy   |          |
| 10-A                | Is the product modular or otherwise adaptable? If YES, describe the product.   |           |     |     | X Materials<br>Manufacturing<br>X Op. Performance                             |          |
|                     |  |           |     |     | IEQ<br>Corp. Env. Policy  |          |
| There are           | 11—EQUIPMENT<br>no questions for Division 11.<br>12—FURNISHINGS<br>Are there components of the furnishings that are reused or refur-<br>bished? If YES, indicate how much of the furnishings, per unit, is re- |           |     |     | X Materials   |          |
|                     | used or refurbished.   |           |     |     | Op. Performance<br>IEQ<br>Corp. Env. Policy                                   |          |
| 12-B                | Does the finishing product for furnishings contain plant-sourced oils<br>and solids utilizing only natural or aliphatic solvents, or both?   |           |     |     | X Materials<br>Manufacturing  |          |
|                     |  |           |     |     | 7 Op. Performance 2<br>X IEQ<br>Corp. Env. Policy                             |          |
| 12-C                | Is the finish water-borne? If NO, indicate the solvent used.   |           |     |     | Materials<br>Manufacturing<br>Op. Performance<br>X IEQ<br>Corp. Env. Policy   |          |
| 12-D                | Is the adhesive or fastener products for furnishings manufactured without the addition of urea-formaldehyde?   |           |     |     | Materials<br>Manufacturing<br>Op. Performance                                 |          |
|                     | 13—SPECIAL CONSTRUCTION<br>no questions for Division 13.   |           |     |     | Corp. Env. Policy   |          |
|                     | 14-CONVEYING SYSTEMS   |           |     |     |   |          |
| 14-A                | Does the elevator operate by using hydraulics? If YES, describe the method used to prevent and mitigate leakage of hydraulic fluid.  |           |     |     | Materials<br>Manufacturing<br>X_Op. Performance<br>IEQ<br>Corp. Env. Policy   |          |
|                     | 15—MECHANICAL  |           |     |     |   |          |
| Oils and Lu<br>15-A |  |           |     |     | X Materials   |          |
| ID-A                | Are the lubricants for the motors, cables, and other moving parts<br>from re-refined sources?  |           |     |     | X Materials<br>Manufacturing  |          |
|                     |  |           |     |     | Op. Performance<br>IEQ<br>Corp. Env. Policy                                   |          |