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# GreenScreen Certified™

## Standard for Building Products

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Clean Production Action designs and delivers strategic solutions for green chemicals, sustainable materials and environmentally preferable products.

“GreenScreen Certified™” is a trademark of Clean Production Action.

The GreenScreen Certified™ Certification Marks are licensed exclusively by Clean Production Action. Additional information about Clean Production Action, GreenScreen® for Safer Chemicals, and the GreenScreen Certified™ Standard for Building Products is available at [www.greenscreencertified.org](http://www.greenscreencertified.org).

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## Overview

# OVERVIEW

## 1. PURPOSE

- 1.1** This guidance document outlines the requirements and process for the GreenScreen Certified™ Standard for Building Products administered by Clean Production Action.
- 1.2** Clean Production Action awards GreenScreen Certified™ Certification Marks via license to manufacturers and suppliers who have paid the required license fee and have demonstrated that their product(s) meet one of three levels of increasingly stringent certification requirements as defined by the GreenScreen Certified™ Standard for Building Products.

## 2. SCOPE

- 2.1** The GreenScreen Certified™ Standard for Building Products is for evaluation of a wide variety of natural and synthetic products or materials used for residential and commercial building, including but not limited to:
  - 2.1.1** Permanently installed building products;<sup>1</sup> and
  - 2.1.2** Furnishings.<sup>2</sup>
- 2.2** Product categories that are out of scope of this standard include but are not limited to:
  - 2.2.1** Whole buildings;
  - 2.2.2** “Mechanical and electrical equipment<sup>3</sup>, specialty items (e.g., elevators, escalators, process equipment, fire suppression systems), and products purchased for temporary use on the project (e.g., formwork for concrete)” (LEED v4 MR Credit Guide; <https://www.usgbc.org/guide/om>, accessed 7/23/18); and
  - 2.2.3** Primary and secondary packaging.
- 2.3** The Applicant for certification should contact Clean Production Action ([greenscreen@cleanproduction.org](mailto:greenscreen@cleanproduction.org)) if questions arise as to whether certain products are within the scope of this standard.
- 2.4** GreenScreen Certified™ Certification Marks do not guarantee adherence to any other external quality, performance, or regulatory requirements.

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<sup>1</sup> This term refers to “products and materials that create the building or are attached to it. Examples include structure and enclosure elements, installed finishes, framing, interior walls, cabinets and casework, doors, and roof”. (LEED v4 MR Credit Guide; <https://www.usgbc.org/guide/om>, accessed 7/23/18)

<sup>2</sup> This is a broad product category that could include commercial office furnishings such as desk systems and seating, and related accessories, or residential furnishings such as mattresses.

<sup>3</sup> Simple electronic devices may be considered in scope of this certification standard if the Applicant can provide full material and chemical inventories to the required thresholds.



## Overview

### 3. SUMMARY OF REQUIREMENTS

The certification requirements for each certification level are summarized in Table 1 below. Each material or product must meet all requirements for the specified certification level in order to be awarded certification. See Section 11 through 15 for full program requirements.

**Table 1: Certification Requirements for Each Certification Level**

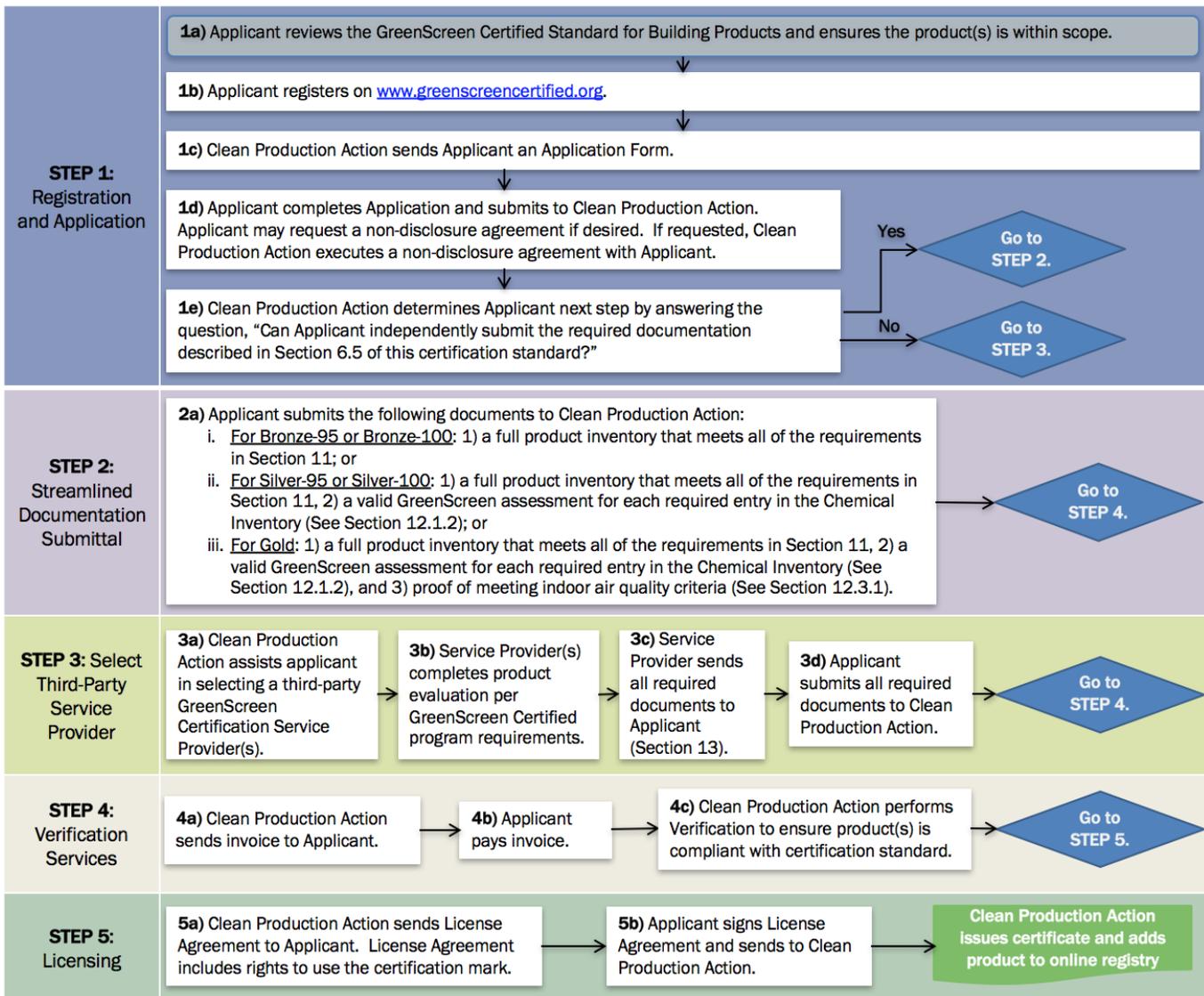
Requirements	Bronze-95	Bronze-100	Silver-95	Silver-100	Gold
Product Inventory includes: a. Material Inventory: 100% of materials in the product are identified b. Chemical Inventory: 0.01% (100 ppm) of substances in the materials are identified	✓	✓	✓	✓	✓
95% of the materials in the product inventory are assessed to 100 ppm (0.01%)	✓		✓		
100% of the materials in the product inventory are assessed to 100 ppm (0.01%)		✓		✓	✓
No GreenScreen List Translator™ LT-1 substances in the assessed materials	✓	✓	✓	✓	✓
No GreenScreen Benchmark-1 substances in the assessed materials			✓	✓	✓
No GreenScreen Benchmark-1, Benchmark-2, Benchmark-2 <sub>DG</sub> or Benchmark-2 <sub>TP</sub> substances in the assessed materials					✓
Substances in the product inventory meet Restricted Substance List (RSL) Criteria	✓	✓	✓	✓	✓
Products with Undefined Recycled Content meet quantity and testing requirements	✓	✓	✓	✓	Not allowed at Gold
Product meets criteria for indoor air quality in Section 12.3.1					✓

## Overview

### 4. PROCESS OVERVIEW

Figure 1 below summarizes the process an Applicant shall follow to obtain certification under the GreenScreen Certified Standard for Building Products. More details on the certification process are described in Sections 6 through 10. An Applicant may wish to perform an optional pre-screen of chemicals in the product inventory to determine if any have a GreenScreen List Translator score of LT-1 before applying to the program.<sup>4,5</sup>

**Figure 1: Process Overview for GreenScreen Certified™ Standard for Building Products**



<sup>4</sup> Online tools that provide automation for GreenScreen List Translator scoring include [Chemical Hazard Data Commons](#) (no cost), [toxnot](#) (no cost), and [Pharos Chemical and Materials Library](#) (free 14-day trial available).

<sup>5</sup> A Health Product Declaration (HPD) is the preferred format for meeting the product inventory requirements described in Section 11.

## Overview

### 5. TERMS AND DEFINITIONS

Term	Definition
Applicant	An organization or entity that submits a product formulation or formulations for certification according to a specific GreenScreen Certified™ standard.
Authorized GreenScreen Assessment	A GreenScreen assessment completed by an Authorized GreenScreen Practitioner™ for his or her registered organization only. An Authorized assessment can be upgraded to a Certified assessment through Clean Production Action and would then qualify for use in the GreenScreen Certified Program.
Authorized GreenScreen Practitioner™	An individual who has completed advanced training in the GreenScreen method, has demonstrated scientific expertise and capacity to perform a high-quality GreenScreen assessment, and is licensed by Clean Production Action to conduct GreenScreen assessments for his or her registered organization.
Biological Material	“Any material containing genetic information and capable of reproducing itself or being reproduced in a biological system.” (European Patent Office; <a href="https://www.epo.org/law-practice/legal-texts/html/guidelines/e/f_iii_6_1.htm">https://www.epo.org/law-practice/legal-texts/html/guidelines/e/f_iii_6_1.htm</a> , accessed 9/13/18)
CASRN	Chemical Abstracts Service Registry Number (also known as “CAS#”).
Catalyst	Chemical compound or substance that causes or accelerates a chemical reaction without itself being affected.
Certification Level	One of five levels of requirements for safer chemicals in product formulations specified in the GreenScreen Certified Standard for Building Products v1.0: Bronze-95, Bronze-100, Silver-95, Silver-100, and Gold.

## Overview

Term	Definition
Certified GreenScreen assessment	A GreenScreen assessment completed by a Licensed GreenScreen Profiler or Clean Production Action Consulting Toxicologist (including an assessment performed by an Authorized GreenScreen Practitioner and upgraded to a Certified assessment through Clean Production Action). Note: The term “Certified GreenScreen Assessment” is distinct from a GreenScreen Certified Product. The former refers to the assessment of an individual chemical using the GreenScreen method (see <a href="https://www.greenscreenchemicals.org/assess/assess-gs-details">https://www.greenscreenchemicals.org/assess/assess-gs-details</a> ). The latter refers to a product that Clean Production Action has verified to meet the GreenScreen Certified Standard for the relevant product category and the manufacturer has signed a license agreement with Clean Production Action.
Chemical	See Chemical Compound.
Chemical Compound	A molecule (or molecular entity) composed of atoms of more than one element held together by chemical bonds and typically identified by CASRN. Synonyms used in this guidance include “chemical” or “compound.”
Chemical Inventory	The portion of the Product Inventory Form used to characterize chemical compounds in each homogeneous material in the product according to the required thresholds.
Chemical Substance “Substance”	“A chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.” (REACH Article 3(1); <a href="http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html">http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html</a> , accessed 9/20/17) A chemical substance is comprised of constituents (i.e., chemical compounds and/or chemical elements), and a chemical substance can be a component within a mixture.
Electrical equipment/ components	“A general term that includes electrical conductors, circuit parts, and antennas where an electrical hazard may exist.” (Los Alamos National Laboratory; <a href="https://www.lanl.gov/safety/electrical/docs/definitions.pdf">https://www.lanl.gov/safety/electrical/docs/definitions.pdf</a> , accessed 9/13/18)

## Overview

Term	Definition
Form-specific hazard	Hazards that are only applicable when the substance is in a specific physical form such as a specified shape and/or size and/or crystalline structure. An example of a form-specific hazard is dust of respirable size (see respirable particles definition) that can penetrate deep into the lungs.
Functional Additive	A chemical compound, chemical substance, or mixture of chemical substances intentionally added to impart a desired characteristic to a product or serve a particular function in the product (e.g., stabilizer, colorant, plasticizer). Functional additives can be polymeric or non-polymeric in nature.
Geological Material	“A material extracted as-is from the earth in rock or sediment form, e.g., stone aggregate.” (Health Product Declaration Open Standard, V2.1; <a href="https://www.hpd-collaborative.org/hpd-2-1-standard/">https://www.hpd-collaborative.org/hpd-2-1-standard/</a> , accessed 7/23/18)
GreenScreen assessment	The assessment of an individual chemical using the GreenScreen method (see <a href="https://www.greenscreenchemicals.org/assess/assess-gs-details">https://www.greenscreenchemicals.org/assess/assess-gs-details</a> ). An Authorized GreenScreen assessment and a Certified GreenScreen assessment are two types of GreenScreen assessments and reflect the type of assessor producing the assessment.
GreenScreen Benchmark™ score	A score that is assigned to a chemical evaluated using the GreenScreen® for Safer Chemicals method. GreenScreen Benchmark scores range from 1 to 4, with each increasing Benchmark score defining progressively less hazardous chemicals. (GreenScreen Guidance and Resources; <a href="https://www.greenscreenchemicals.org/learn/full-greenscreen-method">https://www.greenscreenchemicals.org/learn/full-greenscreen-method</a> )
GreenScreen Certified™ Certification Marks	The trademarked logos and phrase that may be licensed by Clean Production Action for use by a successful Applicant to describe the products that meet all of the requirements of a specified level (Bronze, Silver, or Gold) of the GreenScreen Certified™ Standard for the relevant product category and as verified and approved by Clean Production Action.
GreenScreen List Translator™	A streamlined chemical hazard assessment method developed by Clean Production Action that produces a GreenScreen List Translator score. (GreenScreen Guidance and Resources Section IV; <a href="https://www.greenscreenchemicals.org/learn/full-greenscreen-method">https://www.greenscreenchemicals.org/learn/full-greenscreen-method</a> ).

## Overview

Term	Definition
GreenScreen List Translator™ score	A score that is assigned to a chemical screened against all GreenScreen Specified Lists (Annex 11) using GreenScreen List Translator guidance. List Translator scores include LT-1, LT-P1, LT-UNK and NoGSLT. (GreenScreen Guidance and Resources Section IV; <a href="https://www.greenscreenchemicals.org/learn/full-greenscreen-method/">https://www.greenscreenchemicals.org/learn/full-greenscreen-method/</a> ).
Health Product Declaration (HPD)	The Health Product Declaration (HPD) Open Standard provides a framework for product manufacturers to provide information about product contents and associated health information. The HPD Open Standard is a consensus, stakeholder standard, governed by the HPD Collaborative, a not-for-profit member organization. (Health Product Declaration Collaborative; <a href="https://www.hpd-collaborative.org/hpd-open-standard-all-versions/">https://www.hpd-collaborative.org/hpd-open-standard-all-versions/</a> , accessed 9/22/18)
Health Product Declaration Collaborative (HPDC)	The HPD Open Standard was created and is maintained and evolved by the Health Product Declaration Collaborative (the HPD Collaborative), an organization composed of, and led by, stakeholders throughout the building industry. The HPD Collaborative is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain. (Health Product Declaration Collaborative; <a href="https://www.hpd-collaborative.org/hpd-open-standard-all-versions/">https://www.hpd-collaborative.org/hpd-open-standard-all-versions/</a> , accessed 9/22/18)
Homogeneous material (Material)	“One material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjoined or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.” (EU Directive 2008/98/EC; <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&amp;from=EN</a> , accessed 4/25/18)
Impurity	“An unintended constituent present in a substance as manufactured. It may, for example, originate from the starting materials or be the result of secondary or incomplete reactions during the production process. While it is present in the final substance, it was not intentionally added. In most cases impurities constitute less than 10% of the substance.” (ECHA; <a href="https://echa-term.echa.europa.eu/">https://echa-term.echa.europa.eu/</a> , accessed 10/11/17)

## Overview

Term	Definition
Intentionally Added Substance	See Functional Additive.
Licensed GreenScreen Profiler	An organization with expertise in toxicology and comparative chemical hazard assessment that is licensed by Clean Production Action to provide GreenScreen assessments for a fee for clients. ( <a href="http://greenscreenchemicals.org/professionals/profilers">http://greenscreenchemicals.org/professionals/profilers</a> )
Material Inventory	The portion of the Product Inventory Form used to characterize each homogeneous material in the product (including its parts or assemblies).
Mechanical equipment	“HVAC systems, including air conditioning units, heat pumps, air compressors, vents, or other types of mechanical equipment placed outside of buildings.” (Frederick Town Historic District Design Guidelines; <a href="https://www.cityoffrederick.com/DocumentView.aspx?DID=497">https://www.cityoffrederick.com/DocumentView.aspx?DID=497</a> , accessed 8/06/18)
Monomer	“A substance which is capable of forming covalent bonds with a sequence of additional like or unlike molecules under the conditions of the relevant polymer forming reaction used for the particular process.” (REACH Article 3(6); <a href="http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html">http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html</a> , accessed 4/24/18)
Part	“An optional functional grouping of contents to identify a portion of a product that is used modularly (e.g., cable, caster, chair arm). It is typically not sold to the end user independent of the product.” (Health Product Declaration Open Standard 2.1; <a href="https://www.hpd-collaborative.org/hpd-2-1-standard/">https://www.hpd-collaborative.org/hpd-2-1-standard/</a> , accessed 5/28/18)
Polymer mixture	A mixture comprised of a polymer substance and unreacted monomer(s).

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Term	Definition
Polymer species	<p>“Molecules characterized by the sequence of one or more types of monomer units. Such molecules must be distributed over a range of molecular weights wherein differences in the molecular weight are primarily attributable to differences in the number of monomer units. Polymer species comprise the following: (a) a simple weight majority (i.e., 50%) of molecules containing at least three monomer units which are covalently bound to at least one other monomer unit or other reactant; or (b) less than a simple weight majority of molecules of the same molecular weight.” In the context of this definition a "monomer unit" means the reacted form of a monomer in a polymer.” (REACH, Article 3(5); <a href="http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html">http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html</a>, accessed 10/14/17)</p>
Polymer substance	<p>A substance comprised of constituents: polymer species, additives necessary to preserve stability, and impurities deriving from the manufacturing process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition. (based on REACH Article 3(1); <a href="http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html">http://www.reachonline.eu/REACH/EN/REACH_EN/article3.html</a>, accessed 9/20/17)</p>
Polymeric Material	<p>A mixture of one or more polymer substance(s) or polymer mixture(s), all other functional additives (i.e., intentionally added substances), and unintentional impurities.</p>
Polymeric Material Impurities	<p>Impurities imparted to the polymeric material from a source other than the intentionally added components.</p>
Product	<p>A finished good composed of parts, homogeneous materials, and/or chemical substances. A product may function as part of another product. A product may be made of one or more homogeneous materials.</p>
Product Inventory Form	<p>A form for listing the product contents for each product being certified. This is a general term that encompasses both the Material Inventory (see definition) and the Chemical Inventory (see definition). See form instructions and tables for additional required information.</p>
Respirable Particles	<p>Small particles less than 10 micrometers in diameter (US EPA; <a href="https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm">https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm</a>, accessed 7/26/18)</p>

## Overview

Term	Definition
Recycled Content	“Refers to the portion of materials used in a product that have been diverted from the solid waste stream. If those materials are diverted during the manufacturing process, they are referred to as pre-consumer recycled content (sometimes referred to as post-industrial). If they are diverted after consumer use, they are post-consumer.” (Building Green; <a href="https://www.buildinggreen.com/primer/defining-recycled-content">https://www.buildinggreen.com/primer/defining-recycled-content</a> , accessed 8/06/18)
Residual Monomer	An unintended impurity in a polymer substance.
Substance Impurity	An impurity of a chemical substance or polymer substance, such as a residual catalyst. See also “Impurity.”
Third-Party GreenScreen Certification Service Provider	An organization approved by Clean Production Action to provide product inventory management (including supply chain research and handling confidential business information) and to generate all required documentation for a GreenScreen Certified Applicant.
Undefined recycled content	Term refers to any recycled content used in a product that cannot be confidently traced back to its source in order to meet product inventory and assessment requirements.
Valid GreenScreen Assessment	A GreenScreen assessment report that has not yet expired (i.e., the date the product inventory is assessed for product certification precedes the expiration date listed on the assessment report) and that has not been marked as superseded.
Verification Summary Report	The checklist and/or form used by Clean Production Action and/or third-party service providers to document compliance with the GreenScreen Certified standard requirements.

## Certification Process

# CERTIFICATION PROCESS

## 6. STEP 1: REGISTRATION AND APPLICATION

**6.1 Step 1a)** Applicant reviews this standard in detail and verifies the product is within scope of review before proceeding (See Section 2 to determine scope).

**6.2 Step 1b)** Applicant registers on [www.greenscreencertified.org](http://www.greenscreencertified.org).

**6.3 Step 1c)** Clean Production Action sends Applicant an Application Form.

The Application includes a Material-level Inventory to be completed by the Applicant (See Section 11.1 for Material Inventory requirements). Note that a more detailed Chemical-level Inventory will be required in later stages of certification (See Section 11.2 for Chemical Inventory requirements).<sup>6</sup>

**6.4 Step 1d)** Applicant completes Application and submits to Clean Production Action. Applicant may request a non-disclosure agreement if desired. If requested, Clean Production Action executes a non-disclosure agreement with Applicant.

**6.1. Step 1e)** Clean Production Action determines Applicant next step, depending on the particular needs of each Applicant. An Applicant may go to **STEP 2 – Streamlined Documentation Submittal** if the following conditions are met. If the following conditions are not met, go to **STEP 3 – Select Third-Party Service Provider**.

- Applicant is seeking Bronze-95 certification, AND 100% of materials in the product are identified by material type in a Material Inventory (Section 11.1), AND 95% of the materials in the inventory have a complete Chemical Inventory according to the requirements in Section 11.2,  
**OR**
- Applicant is seeking Bronze-100 certification, AND 100% of materials in the product are identified by material type in a Material Inventory (Section 11.1), AND 100% of the materials in the inventory have a complete Chemical Inventory according to the requirements in Section 11.2,  
**OR**
- Applicant is seeking Silver-95 certification, AND 100% of materials in the product are identified by material type in a Material Inventory (Section 11.1), AND 95% of the materials in the inventory have a complete Chemical Inventory according to the requirements in Section 11.2, AND each substance in the Chemical Inventory has a valid GreenScreen assessment available,  
**OR**

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<sup>6</sup> A Health Product Declaration (HPD) is the preferred format for meeting the product inventory requirements described in Section 11.

## Certification Process

- Applicant is seeking Silver-100 certification, AND 100% of materials in the product are identified by material type in a Material Inventory (Section 11.1), AND 100% of the materials in the inventory have a complete Chemical Inventory according to the requirements in Section 11.2, AND each substance in the Chemical Inventory has a valid GreenScreen assessment available, **OR**
- Applicant is seeking Gold certification, AND 100% of materials in the product are identified by material type in a Material Inventory (Section 11.1), AND 100% of the materials in the inventory have a complete Chemical Inventory according to the requirements in Section 11.2, AND each substance in the Chemical Inventory has a valid GreenScreen assessment available, AND the Applicant can independently provide proof of meeting indoor air quality criteria (See Section 12.3.1).

## 7. STEP 2: STREAMLINED DOCUMENTATION SUBMITTAL

**7.1 Step 2a)** For an Applicant that met the conditions in Step 1e, the Applicant must submit the following documentation to Clean Production Action to initiate **STEP 4 – Verification Services**:

- For Bronze-95 or Bronze-100: 1) a full product inventory that meets all of the requirements in Section 11; or
- For Silver-95 or Silver-100: 1) a full product inventory that meets all of the requirements in Section 11, 2) a valid GreenScreen assessment for each required entry in the Chemical Inventory (See Section 12.1.2); or
- For Gold: 1) a full product inventory that meets all of the requirements in Section 11, 2) a valid GreenScreen assessment for each required entry in the Chemical Inventory (See Section 12.1.2), and 3) proof of meeting indoor air quality criteria (See Section 12.3.1).

**7.2 Step 2b)** Proceed to **STEP 4 – Verification Services**.

Note: Gathering the required documentation in Step 2a is outside the scope of services provided by Clean Production Action. If the Applicant cannot independently provide this required documentation, proceed to **STEP 3 – Select Third-Party Service Provider**.

## Certification Process

### 8. STEP 3: SELECT THIRD-PARTY SERVICE PROVIDER

The Applicant may need to contract with a Third-party GreenScreen Certification Service Provider for help with obtaining information from the supply chain including confidential business information for any certification level and/or for help generating GreenScreen Benchmark scores for Silver-95, Silver-100 or Gold. This work is typically completed under non-disclosure agreement between the Applicant and the third-party GreenScreen Certification Service Provider.

**8.1 Step 3a)** Clean Production Action assists applicant in selecting a [GreenScreen Certification Service Provider\(s\)](#).

Upon request, Clean Production Action can send an introductory email along with the previously submitted Application Package to the selected Service Provider.

**8.2 Step 3b)** Service Provider works directly with the Applicant to complete product evaluation per GreenScreen Certified program requirements (See Section 11 through 15 for full Program requirements).

*Fees for third-party services do not include Verification Services provided by Clean Production Action described in STEP 4.*

**8.3 Step 3c)** Service Provider sends all required documentation to Applicant (See Section 13).

**8.4 Step 3d)** Applicant submits all required documentation to Clean Production Action to initiate Verification Services. Proceed to STEP 4.

### 9. STEP 4: VERIFICATION SERVICES

**9.1 Step 4a)** Upon receipt of required documentation (See Section 13), Clean Production Action will send the Applicant an invoice for Verification Services.

**9.2 Step 4b)** Applicant pays invoice.

**9.3 Step 4c)** Clean Production Action performs Verification to ensure product(s) are compliant with this certification standard.

### 10. STEP 5: LICENSING

**10.1 Step 5a)** Clean Production Action provides Applicant with License Agreement. License Agreement includes rights to use the Certification Mark.

**10.2 Step 5b)** Applicant signs License Agreement and sends to Clean Production Action.

**10.3 Step 5c)** Clean Production Action issues the Certificate and adds product to online registry.

## Program Requirements

# PROGRAM REQUIREMENTS

## 11. PRODUCT INVENTORY

This section describes requirements for a comprehensive product inventory of chemical compounds in building products to enable evaluation against this certification standard. These inventory requirements apply to the finished product as placed for sale on the market. Primary and secondary packaging is not included in this certification.

There are two distinct steps to complete a comprehensive product inventory for all levels of certification. The following sub-sections describe the Material Inventory used during STEP 1 – Registration and Application, and the Chemical Inventory used during product evaluation stages. Due to the potential for products to vary widely with regard to complexity, the intent of this two-stage inventory process is to help make the process more efficient. Applicants may submit both Material and Chemical Inventory together at the time of Application if it is feasible to do so. The Health Product Declaration (HPD) is the preferred format for documenting the full product inventory and meeting the additional requirements outlined in sections 11.1 and 11.2 below.<sup>7</sup>

### 11.1 Material Inventory

A Material Inventory is required for application to the GreenScreen Certified Standard for Building Products program. Each homogeneous material in the product must be included in the Material Inventory, regardless of weight percent of the material in the product. For products with multiple parts or assemblies, each homogenous material in each part and/or each assembly must be included in the Material Inventory.

The Material Inventory submitted by the Applicant during the application process will be used by Clean Production Action to 1) determine if the product(s) is within scope of this certification standard, and 2) identify additional information or third-party services that may be needed in later stages.

#### Material Inventory Requirements:

Identify each homogeneous material in the product. Parts, assemblies, and sub-assemblies may be made up of more than one homogenous material. Coatings and finishes are considered separate homogeneous materials. For example, a powder-coated steel fastener is made of two homogenous materials, the base metal alloy and the coating or finish. For each homogenous material in the product, please list the following:

1. Basic material type (e.g., polycarbonate, steel, plywood, wool, etc.);

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<sup>7</sup> The [HPD Builder](#) can be used as a tool for entering data, performing hazard screening and formatting your reports to be consistent with the HPD Open Standard.

## Program Requirements

2. Trade name and/or metal alloy grade;<sup>8</sup>
3. Part number and description, if the material is in a part or assembly;
4. Weight (in relevant unit such as grams or pounds);
5. Function in the product (e.g., coating/finish, colorant, fastener, etc.)
6. Color;
7. Description, if material is a coating or finish;
8. Percent undefined recycled content; and
9. Alternate materials, if the same material is purchased from multiple suppliers for the same purpose.

### 11.2 Chemical Inventory

A Chemical Inventory is required to complete the certification process including product evaluation. For all levels of certification, 100% of the materials in the Material Inventory must meet the chemical inventory requirements below.

Note: Applicants can redact chemical name and CASRN only if accompanied by a valid GreenScreen assessment and/or for colorants, a “USEPA Safer Choice Acceptable” designation. Where hazard scores are used for redacted chemical name(s), the name of the assessor and date of assessment must be provided along with a traceable alphanumeric ID number.<sup>9</sup>

#### Chemical Inventory Requirements:

List the following for each homogeneous material:

1. **Basic chemical inventory requirements:** CASRN and chemical name of each chemical compound present at or above 100 ppm (0.01%) in the homogeneous material, including intentionally added chemical compounds and unintentional impurities; and
2. Additional guidance and requirements for specific homogeneous material types:
  - a. **Polymeric material:**

Polymeric materials include one or more polymer substances and/or polymer mixtures and potentially one or more functional additives. The polymer substance or mixture includes polymer species, monomer(s), and catalyst(s). Each polymer species, monomer and catalyst in a polymer substance or polymer mixture must be listed as a separate ingredient and meet the basic chemical inventory requirements (#1 above). Functional additives often contain more than one chemical compound. Each chemical compound in a functional additive must be listed as a separate ingredient and meet the basic chemical inventory requirements (#1 above).  
Additional requirement:

<sup>8</sup> Supplier name, location, and contact information is recommended as part of Material Inventory but not required for application to program. This information will be needed if contracting with a third-party to retrieve information from supply chain and/or during verification).

<sup>9</sup> Service options and provider directory available at: <https://www.greenscreenchemicals.org/certified/service-providers>

## Program Requirements

- i. For each chemical compound in a polymer substance or polymer mixture included in the chemical inventory, list the manufacturer-specific trade name of the polymer substance or polymer mixture.
- ii. For each chemical compound in a functional additive included in the chemical inventory, list the manufacturer-specific trade name of the functional additive.

b. **Metal:**

Metal parts are often made from a number of homogeneous materials including the metal alloy and the coating(s) and/or finish(es). Metal coatings and finishes are evaluated as separate homogeneous materials from the metal alloy. Additional requirements for metal:

- i. For each metal, specify the alloy grade or provide a mill certificate to verify full chemical composition information.

c. **Undefined Recycled Content:**

It is often difficult to determine the chemical inventory for recycled content from an undefined source(s). Meeting the basic requirement is required if the chemical inventory is known (Section 11.2.1). When the basic requirement cannot be met, select one of the following:

- i. Submit analytical testing for undefined recycled content as specified in Section 12.2.2, and
- ii. Submit an elemental analysis or specific alloy/grade information for recycled glass or metal only.

d. **Biological or Geological Material:**

Biological and geological materials often contain treatments and/or additives such as binders, coatings, and finishes. Additives and treatments are considered separate homogeneous materials and must be inventoried separate from the biological or geological material. Additional requirement for plant-based materials:

- i. List each residual pesticide present at or above 100 ppm in the biological material.

## Program Requirements

### 12. PRODUCT EVALUATION

#### 12.1 Chemical Hazard Assessment

##### 12.1.1 Bronze-95 and Bronze-100 Screening Requirements

- 1) GreenScreen List Translator™ scores are required for substances in the Chemical Inventory.<sup>10</sup>
- 2) Acceptable GreenScreen List Translator scores include LT-P1, LT-UNK, and/or NoGSLT. No LT-1 scores are permitted in certified products.

##### 12.1.2 Silver-95 and Silver-100 Assessment Requirements

- 1) A valid GreenScreen assessment and GreenScreen Benchmark score is required for each ingredient in the Chemical Inventory, except for colorants (see 12.1.2.3 below).<sup>11</sup>
- 2) No Benchmark-1 scores are permitted in assessed materials of certified products.<sup>12</sup>
- 3) Colorants may be assessed using USEPA Safer Choice criteria instead of GreenScreen for Safer Chemicals when no valid GreenScreen Benchmark score is available. The acceptable designation for colorants in assessed materials is, "USEPA Safer Choice Acceptable".

##### 12.1.3 Gold Assessment Requirements

- 1) A valid GreenScreen assessment and GreenScreen Benchmark score is required for each ingredient in the Chemical Inventory, except for colorants (see 12.1.3.3 below).<sup>9</sup>
- 2) No Benchmark-1, Benchmark-2, Benchmark-2<sub>DG</sub>, or Benchmark-2<sub>TP</sub> scores are permitted in assessed materials of certified products.<sup>10</sup>
- 3) Colorants may be assessed using USEPA Safer Choice criteria instead of GreenScreen for Safer Chemicals when no valid GreenScreen Benchmark score is available. The acceptable designation for colorants in assessed materials is, "USEPA Safer Choice Acceptable".

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<sup>10</sup> Clean Production Action or a third-party GreenScreen Certification Service Provider screens each entry in the Chemical Inventory using GreenScreen® List Translator™. An Applicant may wish to perform an optional **pre-screen** of chemicals in the product inventory to determine if any have a GreenScreen List Translator score of LT-1 before applying to the program. Online tools that provide automation for GreenScreen List Translator scoring include [Chemical Hazard Data Commons](#) (no cost), [toxnot](#) (no cost), and [Pharos Chemical and Materials Library](#) (free 14-day trial available).

<sup>11</sup> An Applicant may use valid Certified GreenScreen assessment(s) obtained either through public databases or through commissioning an assessment. New Certified GreenScreen assessments will need to be generated (typically by a Licensed GreenScreen Profiler) for all remaining substances. Authorized assessments generated by Authorized GreenScreen Practitioners and upgraded to Certified assessments through Clean Production Action qualify for use in the GreenScreen Certified™ Program.

<sup>12</sup> For GreenScreen Benchmark-U, filling data gaps with the “worst-case” hazard level must result in a GreenScreen Benchmark score that fulfills the certification level requirements.

## Program Requirements

### 12.2 Material-Specific Criteria

#### 12.2.1 Restricted Substance List (RSL)

- 1) For 100% of materials in the Material Inventory, substances in the Chemical Inventory are compared to the RSL in Table 2 below. Homogeneous materials shall not contain any chemical or member of a chemical group listed in Table 2 present at or above the material threshold specified in Table 2.

**Table 2: GreenScreen Certified Building Products Restricted Substances List**

Chemical Name or Compound Group	CASRN	Material Threshold (ppm)
Polyvinyl Chloride (PVC)	9002-86-2	0
Lead compounds (See Table 2 in GreenScreen® for Safer Chemicals - Chemical Groups Policy; <a href="https://www.greenscreenchemicals.org/method/method-documents">https://www.greenscreenchemicals.org/method/method-documents</a> , accessed 4/24/18)	Various	40
BPA Structural/functional analogues (See current public list of related compounds in the Chemical Hazard Data Commons; <a href="https://commons.healthymaterials.net/chemicals/2072109">https://commons.healthymaterials.net/chemicals/2072109</a> , accessed 4/24/18)	Various	1000
PERFLUORINATED CHEMICALS (PFASs) – Products does not contain stain- or water-repellant treatments that contain a perfluorinated compound. <sup>13</sup>	Various	1000

- 2) Textiles and textile chemicals must not contain any chemicals listed at or above the thresholds listed on the Zero Discharge of Hazardous Chemicals Programme Group B Manufacturing Restricted Substances List (ZDHC Group B MRSL V1.1).<sup>14</sup>

<sup>13</sup> PFCs (often referred to as PFASs) are a category of compounds that includes long and short chain per- and poly-fluorinated alkyl compounds and fluorinated polymers. PFCs are widely used to make everyday products, including furnishings and fabrics more resistant to stains, grease and water.

<sup>14</sup> <http://www.roadmaptozero.com/programme/manufacturing-restricted-substances-list-MRSL-conformity-guidance>

## Program Requirements

### 12.2.2 Material with Undefined Recycled Content

#### 1) Allowable Quantities

**Table 3: Quantity Requirements for Undefined Recycled Content**

<b>Bronze-95</b> <b>Bronze-100</b>	No GreenScreen List Translator scores can be generated for undefined recycled content. This material type is allowable at Bronze at up to 25% of the product weight for the first year of certification (See Certification Renewal Requirements below).
<b>Silver-95</b> <b>Silver-100</b>	No GreenScreen Benchmark scores can be generated for undefined recycled content. This material type is allowable at Silver at up to 10% of the product weight for the first year of certification (See Certification Renewal Requirements below).
<b>Gold</b>	No undefined recycled content is allowed at Gold for any period of time.

#### 2) Analytical Testing Requirements

Analytical testing is required for each material that contains undefined recycled content. The Applicant shall submit a test report which meets the following specifications:

**Table 4: Analytical Requirements for Undefined Recycled Content**

<b>Analytical Test Method</b>	X-ray fluorescence spectrometry (XRF) method which meets ASTM method specifications for the appropriate material type (e.g., ASTM F2980-13(2017) Standard Test Method for Analysis of Heavy Metals in Glass by Field Portable X-Ray Fluorescence (XRF))
<b>Detection Limit</b>	≤ 100 ppm (0.01%)
<b>Tested substances and allowable thresholds</b>	<ol style="list-style-type: none"> <li>1) Lead (Pb): &lt; 100 ppm</li> <li>2) Mercury (Hg): &lt; 100 ppm</li> <li>3) Cadmium (Cd): &lt; 100 ppm</li> <li>4) Hexavalent Chromium: (Cr VI) &lt; 100 ppm</li> <li>5) Polybrominated Biphenyls (PBB): &lt; 100 ppm</li> <li>6) Polybrominated Diphenyl Ethers (PBDE): &lt; 100 ppm</li> <li>7) Bis(2-Ethylhexyl) phthalate (DEHP): &lt; 100 ppm</li> <li>8) Benzyl butyl phthalate (BBP): &lt; 100 ppm</li> <li>9) Dibutyl phthalate (DBP): &lt; 100 ppm</li> <li>10) Diisobutyl phthalate (DIBP): &lt; 100 ppm</li> </ol>
<b>Frequency of Testing</b>	The frequency of testing must be sufficient to capture potential variability in different batches of materials.

## Program Requirements

### 3) Certification Renewal Requirements

Upon renewal after the first year of certification for Bronze and Silver, the certificate holder must supply the following information for the undefined recycled content:

- a. Name and location of the recycling facility,
- b. A list of CASRNs and chemical names of contaminants tested for by the recycling facility, including rationale for contaminants tested, and allowable limits set by the recycling facility for contaminants tested, and
- c. Methods used for collection and separation of materials.

#### 12.2.3 Materials with Form-Specific Hazards

Form-specific hazards are hazards that are only applicable when the substance is in a specific physical form such as size and shape that can penetrate deep into the lungs. In many cases the only significant exposure to such dust is expected to occur in occupational settings where the substance would be:

- handled as a powder or
- tumbled, cut, sanded, ground, or otherwise mechanically disturbed sufficiently to create significant volumes of the hazardous dust form.

For 100% of materials in the Material Inventory, substances in the Chemical Inventory cannot contain the form of the chemicals listed in Table 5 and receive certification at any certification level. Chemicals listed in Table 5 in forms other than what is specified in Table 5 may be used in certified products if the following warning label is clearly presented on a website listing of the product and on the GreenScreen Certified certificate:

***“This product contains a substance with a GreenScreen List Translator LT-1 score based on a hazard which is specific to physical form. The hazard(s) may be relevant during manufacture, installation, demolition, and use during activities such as sawing, sanding, grinding, and intensive cleaning, and if the product otherwise degrades during use. The hazard is not otherwise expected to be present during normal use.”***

## Program Requirements

**Table 5: Chemicals and chemical groups with known form-specific hazards for airborne, unbound particles of respirable size**

CASRN	Chemical or Chemical Group Name	Relevant form of substance
1333-86-4	Carbon Black	airborne, unbound particles of respirable size (i.e., less than 10 micrometers in diameter)
Various <sup>15</sup>	Crystalline Silicas - Respirable	
Various <sup>13</sup>	Refractory Ceramic Fibers (with alkaline oxide and alkali earth oxide content less or equal to 18 % by weight)	
Various <sup>13</sup>	Titanium dioxide compounds	

### 12.3 Product-Specific Criteria

#### 12.3.1 Indoor Air Quality Criteria (Applies to Gold-level certification only)

For Gold certification, the product must demonstrate compliance with the State of California’s Department of Public Health (CDPH) Services STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS VERSION 1.2 (California Specification 01350). The product must demonstrate compliance either through third-party certification, or analytical testing. The CDPH specifies some of the certification programs and testing labs that provide test service and/or third-party certification based on CDPH Standard Method: <sup>16</sup>

#### Certification Programs

- [Carpet and Rug Institute \(CRI\)](#)
- [Collaborative for High Performance Schools \(CHPS\)](#)
- [Scientific Certification Systems Global Services \(SCS\)](#)
- [UL GreenGuard](#)

#### Testing Labs

- [Berkeley Analytical Associates \(BAA\)](#)
- [Eurofins Product Testing](#)
- [Intertek](#)
- [Materials Analytical Services \(MAS\)](#)
- [UL Air Quality Services](#)
- [VITO](#)

<sup>15</sup> Download the [GreenScreen Chemical Groups Policy](#) for a listing of group member CASRN for chemical groups.

<sup>16</sup> CDPH; <https://www.cdph.ca.gov/Programs/CCDC/DCDC/DEOD/EAH/IAQ/Pages/VOC.aspx>, accessed 7/23/18

## Program Requirements

### 13. DOCUMENTATION REQUIREMENTS

Verification services are performed by Clean Production Action, and include a review of the required documentation described in Table 6 against all certification requirements.

**Table 6: Certification Pathways and Required Documentation for GreenScreen Certified Building Products v1.0**

Section #	Documentation Requirement	Pathways			
		STREAMLINED DOCUMENTATION (‘Yes’ indicates required documentation is completed independently by Applicant)		THIRD-PARTY SERVICE PROVIDER DOCUMENTATION (‘Yes’ indicates required documentation is completed via Service Provider)	
		Bronze	Silver or Gold	Bronze	Silver or Gold
11	<u>Product Inventory</u> : <sup>17</sup> a. Material Inventory(ies), and b. Chemical Inventory(ies)	Yes	Yes	Yes	Yes
12.1.1	GreenScreen List Translator scores	No <sup>18</sup>	Not applicable	Yes	Not applicable
12.1.2	GreenScreen assessments and Benchmark scores	Not applicable	Yes	Not applicable	Yes
12.2.1	Analytical test results for undefined recycled content	Yes	Yes	Yes	Yes
12.3.2	Form-specific warning label(s) (applicable to form-specific hazards only)	Yes	Yes	Yes	Yes
12.3.1	Indoor Air Quality documentation	Not applicable	Yes, Gold only	Not applicable	Yes, Gold only

<sup>17</sup> It is recommended to use the [HPD format](#) to fulfill the product inventory documentation requirements for the GreenScreen Certified Standard for Building Products.

<sup>18</sup> Clean Production Action or Third-party GreenScreen Certification Service Provider will generate final GreenScreen List Translator scores for Bronze.

## Program Requirements

### 14. VERIFICATION AND LICENSING

The Applicant must submit all required documentation in Section 13, as applicable to the certification level, to Clean Production Action and license agreement with Clean Production Action signed in order to be awarded certification and a license to use the Bronze-, Silver-, or Gold- GreenScreen Certified Certification Mark on products and marketing materials.

A certificate for a certified product (or products) is issued by Clean Production Action after Verification is complete, a License Agreement is executed, and the license fee paid. Unless otherwise specified or requested by the Applicant, multiple products will be listed on the same Bronze-95, Bronze-100, Silver-95, Silver-100, or Gold-level certificate.

### 15. CERTIFICATION AND LABELING

#### 15.1 Disclaimer of Liability

Clean Production Action, as the developer of this standard, shall not incur any obligations or liability for any loss or damages, including, without limitation, indirect, consequential, special, or incidental damages, arising out of or in connection with the interpretation or adoption of, reliance upon, or any other use of this Standard by any party. Clean Production Action makes no express or implied warranty of merchantability or fitness for a particular purpose, nor any other express or implied warranty with respect to this Standard.

#### 15.2 Certification Mark

The appropriate GreenScreen Certified Mark may appear on the product, packaging, secondary documents, and promotional materials, only in conjunction with the certified product, and only the core design mark or the design mark with the corresponding level (bronze, silver, gold) which the product has achieved may be used in conjunction with that certified product. All of the Applicant's use of the GreenScreen Certified Mark(s) shall be in accordance with the terms of the executed license agreement. No sub-licensing of the Mark(s) is allowed.

The GreenScreen Certified Mark shall not be used in conjunction with any modifying terms, phrases, or graphic images that might mislead customers as to the extent or nature of the certification. Clean Production Action must review all uses of the GreenScreen Certified Mark prior to printing or publishing.

#### 15.3 Use with Other Claims

The GreenScreen Certified Mark shall not appear in conjunction with any human health or environmental claims, unless verified and approved in writing by Clean Production Action.

#### 15.4 Duration of Certification

Certificates are valid for 1 year, and products must meet the requirements of the current version of the certification standard upon renewal. Within the active certification period, certificate holders must notify Clean Production Action if significant changes in the product's materials were made. Recertification will be required if significant changes to materials (e.g., new materials and/or new substances) have occurred.



The GreenScreen Certified™ Standard for Building Products is for evaluation of a wide variety of natural and synthetic materials and products used for residential and commercial building, including interior furnishings and other design elements. This standard provides the means for manufacturers to communicate their use of safer chemicals per the GreenScreen® for Safer Chemicals hazard assessment method. GreenScreen Certified ensures value, usability, and relevance for industry professionals wanting to excel in offering safer chemical formulations used in product manufacturing.



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