

Optimization

2020 Green Communities Criteria



Chemicals used in building products are largely unregulated. Many have been associated with health impacts like cancer and asthma, and thousands more have not been fully studied. A product is considered to be fully optimized when the contents are completely assessed and hazardous chemicals have been avoided. Using products that demonstrate different levels of optimization through third-party verified disclosures or certifications helps incentivize manufacturers to work toward fully optimized products and helps to minimize health impacts.

This document was created to assist architects and developers pursuing Enterprise Green Communities (EGC) Criterion 6.3: Chemical Hazard Optimization. Below, we take you through the relevant certifications and transparency documents, where to find them, and how to interpret them in relation to the [criterion](#).

The 2020 Green Communities Criteria rewards project teams for choosing products that have third-party verification of optimization to 100 ppm or better. This means that any chemical that is present in the product at 0.01% or greater must be considered for health hazards. More points are awarded for products that meet more rigorous levels of hazard assessment and hazard reduction.

Screening-level optimization requires avoidance of some of the highest concern chemicals and is based on the currently available information about chemical hazards. Assessment-level optimization requires that the chemicals in a product go through a more rigorous process to better understand the potential hazards. Because it is challenging for manufacturers to reach the goal of having 100% of the product's content assessed, and for that content to be of low hazard, credit is given for the intermediate step of having much of the content (95%) assessed to be of low hazard. See page 3 for point levels of different certifications.



Some product categories still have a long way to go toward having optimized products. If you aren't able to find products with these certifications that work for your project, keep in mind that the first steps are content transparency and avoiding key chemicals or materials of concern. Use [HomeFree's Hazard Spectrums](#) to identify materials that are typically best from a hazard perspective in different product categories.



What is it	Where to find it
<p>Cradle to Cradle sets product standards to guide designers and manufacturers. To become certified, products are assessed across five sustainability categories: material health, material reuse, renewable energy and carbon management, water stewardship, and social fairness. A product is assigned an achievement level (Basic, Bronze, Silver, Gold, Platinum) for each category. A product's overall certification level is based on the lowest category achievement. Products may seek a Material Health Certificate, which considers just the material health performance. More information is available on the C2C website.</p>	<p>You can find C2C Certified products in the Products Registry, and products with the Material Health Certificate in the Materials Health Certificate Registry.</p>
<p>GreenScreen Certified is an independent, non-profit certification standard that promotes the use of inherently safer chemicals in products and manufacturing. Products are certified to the Bronze, Silver, or Gold level. For more information visit the GreenScreen Certified website.</p>	<p>At the time this guide was made, no GreenScreen Certified building products were available on their website.</p>
<p>The Living Product Challenge is a framework for manufacturers to create products that are healthy, inspirational, and give back to the environment. It consists of seven performance categories, or Petals: Place, Water, Energy, Health + Happiness, Materials, Equity, and Beauty. Petals are subdivided into a total of 20 Imperatives. Transparent Material Health is one of the imperatives, and it requires a hazard assessment of all intentionally added content in the product. Manufacturers are allowed five percent of the product to remain unassessed for initial certification, but it must be 100% assessed for recertification. This is indicated by the percent assessed – 95% or 100% – on the label. More information on the Living Product Challenge is available here.</p>	<p>Products certified to meet the Living Product Challenge can be found in the Living Product Database.</p>
<p>Declare Labels disclose what a product is made of, where it comes from, and where it goes at the end of its life. Declare Labels also indicate whether products contain chemicals on the Living Building Challenge Red List. More information about Declare is available here.</p>	<p>Products with Declare Labels can be found in the Declare database.</p>
<p>Health Product Declaration (HPD) is the industry's collaborative, user-designed open standard for disclosing a product's content and associated health hazards. HPDs use a standard reporting format. They are an inventory tool and do not provide explicit judgement on safer products. HPDs report chemical hazards based on a set of authoritative hazard lists and include a score for each chemical using the GreenScreen methodology. LT or List Translator scores are based on hazard lists from specific governmental and non-governmental organizations. BM or Benchmark scores are based on a comprehensive assessment of a chemical's hazards. BM-1 and LT-1 chemicals are a high priority to avoid. Learn more about HPDs here.</p>	<p>All current, valid HPDs are searchable in the HPD Public Repository.</p>

Point Levels for Different Certifications in the 2020 Green Communities 6.3 Criteria

1 point per three installed products with screening-level optimization for 100% of content to 100ppm, verified by a third party

- Third-party verified Declare Red List-free
- Third-party verified Declare Red List Approved, *previously called Living Building Challenge (LBC) Compliant* (if the only exemption is the proprietary ingredient exemption)
- Cradle to Cradle (C2C) Basic or Bronze; C2C Material Health Certificate Basic or Bronze
- GreenScreen Certified Bronze-100
- Third-party verified HPD with no LT-1s or publicly available BM-1

1 point per two installed products with assessment-level optimization for 95% of content to 100ppm, verified by a third party

- GreenScreen Certified Silver-95
- C2C Silver
- Living Product Challenge with Transparent Material Health, to 95%

1 point for each installed product with assessment-level optimization for 100% of content to 100ppm, verified by a third party

- Living Product Challenge with Transparent Material Health, to 100%
- C2C Gold or Platinum C2C Material Health Certificate Gold or Platinum or C2C Material Health Certificate Silver showing 100% assessed
- GreenScreen Certified Silver-100 or Gold
- Third-party verified HPD where each chemical in the product is assessed and the product is free of GreenScreen BM-1 chemicals

Identify C2C Certified Products That Meet the 6.3 Criterion

C2C Certified Product

You find the overall certification level and download the certificate by clicking on the desired product in the Registry. The overall certification level is indicated in the product scorecard, and at the top of the page.

Cradle to Cradle Certified Product Scorecard	
MATERIAL HEALTH	Silver
MATERIAL REUTILIZATION	Silver
RENEWABLE ENERGY & CARBON MANAGEMENT	Bronze
WATER STEWARDSHIP	Silver
SOCIAL FAIRNESS	Silver
OVERALL CERTIFICATION LEVEL	Bronze

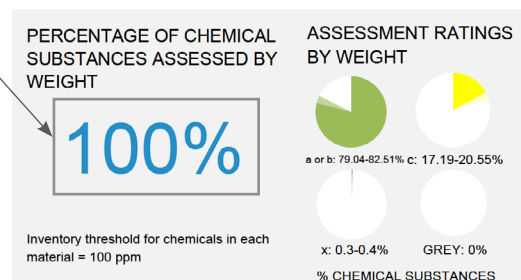
Material Health Certification

The certification level is indicated in the Material Health icon.

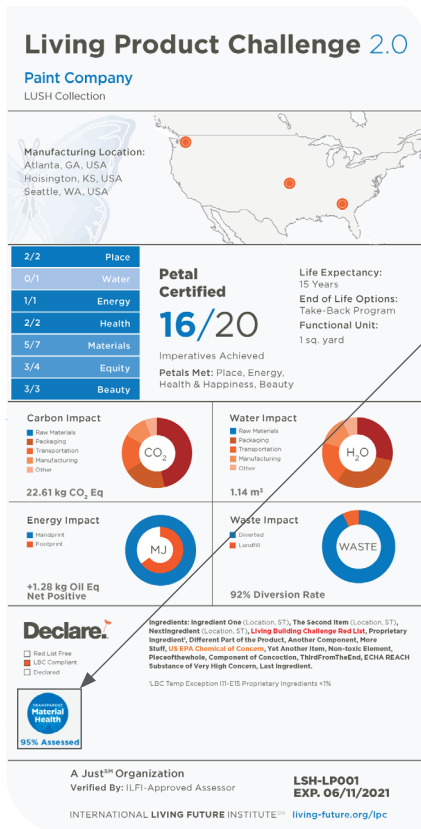


Material Health Certification

To determine if a C2C Material Health Certificate Silver meets the requirement of 100% assessed (to qualify for its own point), check the percentage assessed by downloading the Material Health Certificate. Check the Percentage of Chemical Substances Assessed by Weight at the bottom left of the first page.



Identify Living Product Challenge Products That Meet the 6.3 Criterion



The label indicates whether the product meets the requirements of Transparent Material Health and the percentage assessed (95% or 100% required for different levels in the EGC criterion).

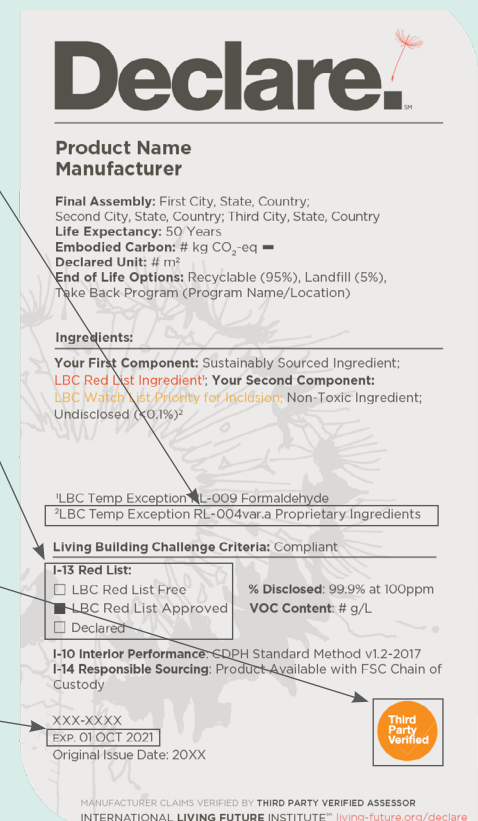
Identify Declare Products That Meet the 6.3 Criterion

If “Red List Approved,” the Proprietary Ingredients exemption is allowed, but if it has any other exemptions listed, it does not qualify.

“LBC Red List Free” meets the requirements. If “Red List Approved,” it must have no other exemptions except the Proprietary Ingredients exemption, see above.

The Declare Label must be Third party verified to qualify.

Make sure the Declare Label is valid by checking the Expiration Date.



Identify HPDC Products That Meet the 6.3 Criterion

To identify if there are “no LT-1s or publicly available BM-1,”:

Threshold must be 100 ppm.

Check the “Contents highest concern Green-Screen Benchmark or List translator Score.” If it is NOT BM-1 or LT-1, then the product qualifies.

Make sure the HPD is valid by checking the Expiry Date.

HPD must be marked “Yes” for Third Party Verified.

Product Name by Product Manufacturer
HPD UNIQUE IDENTIFIER:
CLASSIFICATION:
PRODUCT DESCRIPTION:

Health Product Declaration® v2.2
created via:

Section 1: Summary Basic Method/Product Threshold

CONTENT INVENTORY
Inventory Reporting Format:
 Nested Materials Method
 Basic Method
Threshold Disclosed Per:
 Material
 Product

Threshold Level:
 100 ppm
 1,000 ppm
 Per GHS SDS
 Other

Residuals/Impurities:
 Considered
 Partially Considered
 Not Considered
Explanation(s) provided for Residuals/Impurities?
 Yes No

All Substances Above the Threshold Indicated Are:
Characterized Yes Ex/SC Yes No
% weight and role provided for all substances.

Screened Yes Ex/SC Yes No
All substances screened using Priority Hazard Lists with results disclosed.

Identified Yes Ex/SC Yes No
Disclosed by Name (Specific or Generic) and Identifier except SC substances identified according to SC guidance.

SC=Special Condition (See Notes)

CONTENT IN DESCENDING ORDER OF QUANTITY
Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals. The HPD does not assess whether using or handling the product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

Number of GreenScreen BM-4/3 contents:
Contents highest concern GreenScreen Benchmark or List translator Score:
Nonmaterial
INVENTORY AND SCREENING NOTES:

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
Regulatory (g/l):
Material (g/l):
Does the product contain exempt VOCs?
Are ultra-low VOC lists available?

CERTIFICATIONS AND COMPLIANCE (See Section 3 for additional settings)
VOC Emissions:
CONSISTENCY WITH OTHER PROGRAMS

Third Party Verified?
 Yes
 No

PREPARED BY:
NAME:
VERIFICATION #:

SCREENING DATE:
PUBLIC RELEASE DATE:
EXPIRY DATE: 2022-09-30

HPD v2.2 created via Page of

To identify if “each chemical in the product is assessed and the product is free of GreenScreen BM-1 chemicals,”:

Product Name by Product Manufacturer
HPD UNIQUE IDENTIFIER:
CLASSIFICATION:
PRODUCT DESCRIPTION:

Health Product Declaration® v2.2
created via:

Section 1: Summary Basic Method/Product Threshold

CONTENT INVENTORY
Inventory Reporting Format:
 Nested Materials Method
 Basic Method
Threshold Disclosed Per:
 Material
 Product

Threshold Level:
 100 ppm
 1,000 ppm
 Per GHS SDS
 Other

Residuals/Impurities:
 Considered
 Partially Considered
 Not Considered
Explanation(s) provided for Residuals/Impurities?
 Yes No

All Substances Above the Threshold Indicated Are:
Characterized Yes Ex/SC Yes No
% weight and role provided for all substances.

Screened Yes Ex/SC Yes No
All substances screened using Priority Hazard Lists with results disclosed.

Identified Yes Ex/SC Yes No
Disclosed by Name (Specific or Generic) and Identifier except SC substances identified according to SC guidance.

SC=Special Condition (See Notes)

CONTENT IN DESCENDING ORDER OF QUANTITY
Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals. The HPD does not assess whether using or handling the product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

Number of GreenScreen BM-4/3 contents:
Contents highest concern GreenScreen Benchmark or List translator Score:
Nonmaterial
INVENTORY AND SCREENING NOTES:

MATERIAL	SUBSTANCE	RESIDUAL OR IMPURITY	GREENSCREEN SCORE	HAZARD TYPE
EXAMPLE WATER	RES ALUMINUM OXIDE	RES RES	BM-1	BM-1
	POLYPROPYLENE ACID	AMMONIUM SALT	BM-1	BM-1

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
Regulatory (g/l):
Material (g/l):
Does the product contain exempt VOCs?
Are ultra-low VOC lists available?

CERTIFICATIONS AND COMPLIANCE (See Section 3 for additional settings)
VOC Emissions:
CONSISTENCY WITH OTHER PROGRAMS

Third Party Verified?
 Yes
 No

PREPARED BY:
NAME:
VERIFICATION #:

SCREENING DATE:
PUBLIC RELEASE DATE:
EXPIRY DATE: 2022-09-30

HPD v2.2 created via Page of

Threshold must be 100 ppm.

Check the “Contents in Descending Order of Quantity.” All contents must have a Benchmark score (indicated by BM in the gray highlighted sections) of BM-2, BM-3, or BM-4.

HPD must be marked “Yes” for Third Party Verified.

Make sure the HPD is valid by checking the Expiry Date.