Summary of Changes to the First Draft of the Cradle to Cradle Certified Product Standard, Version 4
July 2020

This document summarizes each substantive change made to the first draft of the Cradle to Cradle Certified version 4 standard (v4). Clarifications, corrections, and other specific/individual changes made to the first draft are not provided in this summary document.

To view all changes made to the first draft of v4, please see the ‘red-line’ versions of the revised standard on the C2CPII website.

Summary of Changes

● Introduction

1.3.2 Certification Requirements and Levels
● The Basic certification level was removed from the Cradle to Cradle Certified Products Program and the draft v4 Basic level requirements were merged into the draft v4 Bronze level requirements.

1.3.3 Bronze Level is a Provisional Certification
● The Bronze certification level was changed to be a provisional certification level. Product certifications at the Bronze level will be limited to two years (i.e. one certification cycle); recertification at the Silver level will be required for a product to remain in the program.

1.3.4 Product Types Not Eligible for the Bronze Achievement Level in Material Health
● Children’s products, cosmetics, and personal care products will be ineligible for certification at the Bronze achievement level in Material Health (i.e., they must meet the Silver achievement level or higher in Material Health) due to the possibility of containing carcinogens, mutagens, or reproductive toxicants (CMRs); persistent, bioaccumulative, and toxic substances (PBTs); very persistent and very bioaccumulative substances (vPvBs); or substances that cause an equivalent level of concern.

● Products Eligible for Certification

2.2 Products Not Eligible
● The following products are no longer eligible for certification:
  ○ Single-use plastic products
  ○ Fur (and products containing fur), including products that use fur that has been shorn or otherwise removed from the hide or skin (e.g. fox, mink, beaver, ermine, and rabbit including angora rabbit fur/wool)
The clause stating that “soaps, cleansers, and cleaning products that contain antimicrobial substances known or suspected of contributing to antibiotic resistance” are ineligible for certification has been changed to indicate that disinfectants, including those used for human hygiene purposes (e.g. hand sanitizers), are ineligible unless active ingredients are approved for use per the European Union's Biocidal Products Regulation.

**General Requirements**

*3.2.3 Assessing Environmental Risks & Opportunities*
- Products that are primary contributors to microfiber and microplastic pollution (i.e. textile and apparel products made from synthetic fibers that are wet processed and/or that require washing with water during the use phase, tires, and plastic pellets) are newly designated as de facto high risk. For these product types, microplastic pollution must be addressed in the Bronze level environmental policy, strategy for implementation, and progress reporting.

*3.2.6 Demonstrating Commitment*
- A requirement has been added at the Bronze level asking applicant companies to demonstrate commitment and support for establishing and maintaining a culture whereby employees and business partners are able to achieve high levels of environmental performance.

**Material Health**

*Section 4.3 Restricted Substance List Compliance*
- Various edits have been made to the C2CPII Restricted Substance List reference document pertaining to this requirement to reflect additions made to the source regulations since the last release, correct mistakes and omissions, and more closely align with the referenced source regulations.
- The EU’s recast Persistent Organic Pollutant (POP) Regulation (EC) 2019/1021 was added to the reference document and the maximum allowable concentrations for various POP substances on the list were adjusted to align with this new regulation (mostly to ‘non-use’).
- The reference document now states that to demonstrate compliance, testing for PCBs is required for products that are colorants, dyes, or inks containing diarylide yellow, orange, and red and phthalocyanine blue and green pigments.

*Section 4.4 Avoidance of Organohalogens*
- A new entry-level (Bronze) requirement has been added to this section to more directly address concerns regarding specific classes of organohalogen materials and chemicals (i.e. per- and polyfluoroalkyl substances (PFASs), halogenated flame retardants (HFRs),
halogenated polymers, halogenated organic solvents, and other highly halogenated, carbon-based materials).

- The restriction on materials containing 1% or more halogens in organic substances by weight (only requirement in this section in the original v4 draft) has been moved to the Silver level.
- Exemption #1 may no longer be claimed for materials that are surface coatings applied to foodservice ware or textiles, including apparel, carpets, and furnishings.

Section 4.5 Material and Chemical Inventory
- The same exceptions that already applied to the inventory limit for homogeneous materials have been added to the inventory limit for process chemicals (with the default limit still set at 1000 ppm for process chemicals instead of 100 ppm as it is for materials).
- Where lower than 1,000 ppm, the limits on specific substances listed on the Zero Discharge of Hazardous Chemical (ZDHC) Manufacturing Restricted Substance List were added as an exception to the process chemicals subject to review threshold for textile processing chemicals.

Section 4.8 Using Optimized Materials
- The Silver level restrictions were extended to include all substances on the REACH Candidate list of Substances of Very High Concern (SVHC) for Authorisation, regardless of the specific toxicity concerns (i.e. now the restriction also includes substances that “cause an equivalent level of concern”).
- The percentage of A/a and B/b assessed materials and chemicals required in products at the Platinum level was reduced from 75% to 50%.

Section 4.9 Volatile Organic Compound (VOC) Emissions
- Some changes were made to the C2CPII VOC Emissions Testing reference document pertaining to this requirement:
  - The formaldehyde emissions requirement for composite wood at the Gold level was made more rigorous (from 100% to 50% of the European E1 class).
  - Formaldehyde limits have been added to items #1, #2, #6, and #7 in the 'Low VOC' section. Standards without a strong enough limitation on formaldehyde have either been excluded or an additional requirement to meet more rigorous formaldehyde limits has been added.

Section 4.10 Volatile Organic Compound (VOC) Content
- An exemption has been added for water-based consumer products for which the only VOCs contained are ethanol, isopropanol, or fragrances.

Section 4.11 Optimizing Chemistry in the Supply Chain
• An allowance has been added to receive credit for using materials certified to programs that are equivalent to the Material Health Certificate or to full Cradle to Cradle certification.

• **Product Circularity**
  
  **Section 5.3 Circularity Education**
  
  • Requirements that more thoroughly define an acceptable circularity education initiative were added at the Bronze level.

  **Section 5.4 Defining the Product’s Technical and/or Biological Cycles**
  
  • Biological materials and materials with unavoidable releases to the environment during use or end of use (e.g. materials that unavoidably abrade) are no longer required to be designated for the biological cycle. Unavoidable release is addressed in section 5.6 Material Compatibility for Technical and/or Biological Cycles.

  **Section 5.5 Preparing for Active Cycling**
  
  • For the Bronze level cycling plan, a requirement was added for products containing electronic components to address the recovery and recycling of intentionally used trace elements whose extraction is associated with risks of limited supply.
  
  • The Silver level requirements to initiate partnerships for recovery and processing of 60% of product sales were revised to allow for any combination of the three options (partnerships, product stewardship laws, or municipal cycling) to be used interchangeably towards meeting the required 60%. In addition, the use of dedicated internal resources was added as an alternative to initiating partnerships.

  **Section 5.6 Increasing Demand: Incorporating Cycled and/or Renewable Content**
  
  • Various edits have been made to the C2CPII Required Percentages of Cycled and Renewable Content by Product and Material Type reference document pertaining to this requirement to correct mistakes and omissions and to refine the required percentages for select product types.
  
  • Use of the alternative compliance pathway which allows for public disclosure of the limitations preventing achievement of the required percentages of renewable and/or cycled content, and a strategy for increasing the percentage over time, is no longer allowed at the Platinum level.

  **Section 5.7 Material Compatibility for Technical and/or Biological Cycles**

Requirements were revised to more specifically define when several product and material types may be counted towards the percentage compatible as follows:

• The requirements for materials with unavoidable release to the environment during product use (tires, shoe soles, brake pads, etc.) have been revised to indicate that the
fraction of material that on average is likely to be released to the environment from the total product over its lifetime may not be counted as compatible with the intended cycling pathway, unless it is biodegradable in the likely environment where release occurs.

- Compatibility requirements were added for wet-applied products that are applied to materials intended for technical cycles. For inks and adhesives for printed products, compliance with specific standards is required.
- Requirements for high-value cycling of technical materials were revised to include solid biological materials.

**Section 5.8 Circularity Data and Cycling Instructions (previously “Materials Passport”)**

- Reporting requirements have been simplified and split into publicly providing (1) applicable circularity data, and (2) cycling instructions (when applicable) in the C2CPII *Circularity Data Report*, which has replaced the C2CPII Materials Passport. Reporting is still required at the Bronze level, but the reporting requirements no longer increase with certification level.
- The circularity data requirement may now be fulfilled using third-party reporting standards such as EPEA’s Materials Passport or the Product Circularity Data Sheet.

**Section 5.10 Product Designed for Disassembly**

- The Gold level requirement indicating that destructive disassembly must be completely avoided has been replaced with ‘processes that result in the loss of specific materials in the product in order to recover other materials (i.e. burning plastics to recover metals) must be avoided’.

**Section 5.11 Active Cycling and Definitions Section**

- The definition of a short use-phase product has been changed from a < 1 month to a < 1 year use phase. This will result in more products being required to demonstrate active cycling at the Gold level instead of the Platinum level.

- **Clean Air & Climate Protection**

  **Category name**
  
  Category name changed to *Clean Air & Climate Protection; formerly Renewable Energy & Climate.*

**Section 6.3 Air Emissions Compliance**

- The Basic level (now Bronze) permit compliance requirements have been revised to address cases where air emissions permits do not exist or may not be adequate.
Section 6.4 Quantifying Greenhouse Gas Emissions & Section 6.10 Addressing Greenhouse Gas Emissions

The requirements to estimate and address embodied emissions have been strengthened.

- Embodied emissions must now be estimated at the Silver instead of the Gold level.
- The Gold level target for offsetting or otherwise addressing embodied emissions has been increased from 5% to 25%.
- For products other than construction products and building materials, the requirement for a qualified third-party to conduct a critical review of the embodied emissions estimates has been moved from the Gold to the Platinum level. For these product types, an internal review is required at the Gold level instead. (A critical review is still required at the Gold level for construction products and building materials.)
- Acceptable methods have been added for demonstrating that embodied emissions have been addressed. These include comparing product performance to an industry benchmark, a sample of similar products, or past product performance.

6.6 Using Renewable Electricity and Addressing Greenhouse Gas Emissions in Final Manufacturing

Requirements applicable to the final manufacturing stage have been revised to encourage actions that will better support the shared goals of increased renewable energy supply, clean air, greenhouse gas emissions reductions, and stable climate.

- The acceptable methods of achieving the renewable electricity targets applicable to the final manufacturing stage at the Gold and Platinum levels have been changed.
  - For 50% of the Gold level renewable electricity target (i.e. 25% of total electricity used), the requirement to procure third-party certified renewable electricity has been replaced with a requirement to procure renewable electricity through long-term power purchase agreement(s) (PPAs) supporting new renewable electricity installations. The alternatives to either produce the renewable electricity onsite or to purchase carbon offsets to compensate for the resulting emissions are unchanged.
  - The entire Platinum level renewable electricity target of >100% must now be met via either onsite generation of renewable electricity or long-term PPAs supporting new renewable electricity installations. In the first draft, 50% of the renewable electricity target (i.e. 50% of total electricity used) was to be met via onsite generation or procurement of third-party certified renewable electricity, with purchase of carbon offsets to compensate for the resulting emissions as an alternative.

- The Platinum level renewable electricity and offset targets applicable to the final manufacturing stage now encourage applicants to electrify energy demand to the degree possible, and renewably source all energy needs (i.e. both purchased electricity and fuels used directly onsite). Acceptance of carbon offsets for achieving the Platinum level
targets has therefore been minimized where under the first draft, carbon offsets could be used exclusively and without restriction to achieve the Platinum level targets.

- Carbon offsets may now only be used to compensate for greenhouse gas emissions resulting from non-energy sources and eligible bioenergy receiving partial credit.
- The following exceptions apply: If the physical infrastructure and/or the political situation do not allow for achieving this goal, the use of carbon offsets to address greenhouse gas emissions resulting from purchased electricity and/or burning of fuels onsite will be reviewed for acceptance on a case-by-case basis.

- Financial support of a climate-relevant public policy initiative now receives credit as an alternative to meeting the renewable electricity targets applicable to the final manufacturing stage at Bronze and Silver, and for 50% of the Gold level target.

Section 6.7 Energy Efficiency During Use:

- Efficiency certification or similar (e.g. EnergyStar or other energy use labelling) is newly required at the Bronze level for products that use energy (e.g. appliances) or greatly impact the energy efficiency of buildings (e.g. windows, insulation) to ensure product end-users have the information necessary to make energy efficient choices.

Section 6.8 Transparency

Transparency requirements have been added.

- For the Basic level (now Bronze), greenhouse gas emissions data for final manufacturing must be made available to stakeholders.
- For the Gold level, embodied greenhouse gas emissions data must be made available to stakeholders, and for construction products and building materials this must be in the form of an Environmental Product Declaration (EPD). An EPD must be produced for all other product types at Platinum level.

Water and Soil Stewardship

The category name and focus has been changed from Water Stewardship to Water and Soil Stewardship.

- The majority of the requirements remain the same, with language added throughout to clarify where soils and sludge (which has high potential to impact soil quality) were already considered. For example, the definition of pollutant intense processes already included soil erosion for some key material types, and assessment of product-relevant chemicals in effluent already required assessment of those chemicals in the context of sludge.
- The inclusion of soils has slightly increased the flexibility of some requirements. For example, the Gold level positive impact project (section 7.11) may now address water and/or soils related issues.
Several sections of the category have been revised to make the requirements more feasible and to align with the level of effort required in the other standard categories as follows:

- **Section 7.4 Effluent Quality Compliance:** The permit compliance requirement for tier 1 suppliers of key materials associated with pollutant intense processes has been moved from the Basic (now Bronze) to the Silver level.

- **Section 7.7 Water and Soil Stewardship Strategy:** The Bronze level strategy must now include a plan for achieving at the Silver level rather than the Gold level. A strategy for achieving at Gold level is instead required at the Silver level.

- **Section 7.8 Water and Soil Conservation:**
  - An alternative has been added to the Gold level requirement to use key materials certified to a C2CPII-recognized certification that addresses the quantity and quality issues of concern. This alternative requires public disclosure of the limitation(s) preventing the incorporation of the required percentage(s) of certified material, a strategy for increasing the percentage over time, and progress reporting at recertification. This is similar to the alternative compliance pathway in the ProductCircularity category for achieving the required percentages of renewable and cycled content and may not be used at the Platinum level.
  - For textiles, conformance with the ZDHC wastewater guidelines receives credit as a best practice at the Silver and Gold levels but is no longer absolutely required. This point has been removed from the standard and will be noted in the User Guidance.
  - Platinum level requirements applicable to the supply chain have been removed.

- **Section 7.9 Assessing & Optimizing Product Relevant Chemicals in Effluent and Sludge:**
  - The Bronze level requirement to assess all product-relevant chemicals entering effluent and sludge has been replaced with a requirement for these chemicals to comply with the relevant restrictions on the Core RSL.
  - Assessment of product-relevant process chemicals entering effluent and sludge is now required at the Silver rather than the Bronze level. This aligns with the Material Health requirement to assess intentional product inputs that also enter effluent and sludge at the Silver level (where 95% must be assessed). Assessment and optimization of all product-relevant chemicals entering effluent and sludge is still required at the Gold level.
  - In alignment with changes made in the Material Health category, all substances on the REACH Candidate list of Substances of Very High Concern (SVHC) for Authorisation are restricted at the Silver level regardless of the specific toxicity concerns (i.e. now the restriction also includes substances that “cause an equivalent level of concern”).

- An option has been added to define key materials based on the results of a third-party verified life cycle assessment and hot spots analysis. This is an alternative to employing the list of key materials and associated high volume and pollutant intense processes to define which requirements are applicable to the supply chain throughout the category.
Social Fairness

Section 8.5 Monitor and Verify Performance
Changes have been made to the Silver level requirements relevant to obtaining social audit data from tier 1 suppliers (i.e. direct suppliers to the final manufacturing stage) to better align with best practice:

- The time allowance for obtaining social audit data from tier 1 suppliers in de facto high risk locations has been changed from four years to two years and now applies to all applicants rather than to those in the apparel industry alone.
- A requirement has been added indicating that human rights issues of high concern (e.g. child labor, forced labor), if identified at tier 1 supplier locations based on having obtained social audit data, must be resolved prior to certification or recertification.

Section 8.10 Positive Impact Project
- The positive impact project was moved from the Gold level to the Silver level to better encourage and recognize actions taken to promote social fairness. An impact assessment must still be performed at the Gold level, and measurable progress demonstrated at recertification.

Packaging for Certified Products (new section)
Material Health and circularity requirements applicable to certified product packaging have been strengthened, and the scope of the packaging requirements has expanded. The requirements apply at the Bronze level.
- Requirements previously included in sections 9.2 Primary Packaging of Formulated Consumer Products and 9.3 Other Product Packaging have been incorporated into this new section.
- Primary packaging materials for formulated consumer products that are fast-moving consumer goods, including cosmetics, personal care, and household and industrial/institutional cleaning products, and for any product, packaging materials that are intended to be used with the product or for the application or dispensing of the product (e.g., glue stick, paper towel cores) must: (1) Comply with the RSL and organohalogen restriction, and (2) meet two out of four circularity requirements.
- Any other packaging materials contained in one sales unit as it is offered to the end user or consumer at the point of purchase (e.g. toothpaste box) must: (1) comply with the organohalogen restriction and (2) meet one out of five circularity requirements.

Product & Material Type Specific Requirements (previously section 9)
Section 10.1 Plastic Packaging Products (Certified as Separate Products)
- The requirements that previously applied to single-use plastic products are now applicable only to plastic packaging products (certified as separate products) that are
reusable/refillable (i.e. intended for multi-use) and are packaging for C2C Certified products.

- **Private Label Requirements (previously section 10)**
  - No substantive changes