

SPECIAL CONDITION: Mixed Recycled Content

Version: SC MixedRC/2023-07-20

BACKGROUND

Definition: Mixed recycled content includes recycled content of mixed/unknown composition and/or composition that varies on a batch-by-batch basis. Such materials may come from a post-consumer source where there is low regard for separation, identification, and/or cleaning the materials to a higher level of purity¹.

NOTE: Recycled content comes in many different forms. Some recycled content is of well-defined composition, either because the recycled input is pure (such as post-industrial scrap and select post-consumer scrap like aluminum cans), or because of extensive processing to meet demands of specific applications; this material is not considered a Special Condition. *Recycled content of well-defined composition that can be identified by the CAS numbers of the contained chemical substances must be inventoried according to the HPD standard inventory method.*

Why is this a Special Condition: *A content inventory cannot be created with methods outlined in the current version of the HPD Open Standard due to variable or unknown composition and lack of CAS RNs.* Mixed recycled content, whether post-industrial or post-consumer, is sometimes used in manufacturing as-is with very little processing or is only processed for cleaning or physical form. These complex mixtures of variable or unknown composition cannot be readily broken down by CAS number. In addition, there is no clearly defined protocol today for characterizing and testing the composition and potential for impurities in mixed recycled content streams.

Scope: Any binders, coatings, and finishes, which are considered unique homogeneous materials in the HPD Open Standard, along with additives or other identifiable substances added to the material, must be inventoried as a separate substance or material on the HPD.

Required Data Reporting

The following are the data reporting requirements to be used under this Special Condition. All data reporting is optional, but lack of specific data points, as noted here, affects compliance with key indicators for the HPD [see 2.1.2.3 Characterized, Screened, Identified in the HPD Open Standard]:

- The following data is required to be provided for the content to be indicated as “Yes” for “Characterized” on the HPD report:
 - *Ingredient Description.* Enter a brief description of the component or part (including its function). The HPD cannot be published without

For all contents above the threshold, the manufacturer has:

Characterized Yes No
Provided weight and role

Screened Yes No
Provided screening results using HPDC-approved methods

Identified Yes No
Provided name and CAS RN or other identifier

¹ Cradle to Cradle Certified, *Recycled Content Materials Assessment Methodology*, May 2017, page 6. <http://www.c2ccertified.org/resources/detail/recycled-content-materials-assessment-methodology>



these fields being completed according to the HPD Open Standard.

- The following data is required to be provided for the content to be considered “Identified” on the HPD report:
 - *Material name.* Enter all Substances with known CAS RNs, quantities, and thus with (known) hazards identified by the HPD Builder, as required by the HPD Open Standard.
 - *Identifier.* Enter “Mixed Recycled Content” when using this guidance.
 - *Ingredient Description.* Enter a brief description of the component or part (including its function).
- The following data is required to be provided for the content to be considered “Screened” on the HPD report:
 - *Material name.* Enter all Substances with known CAS RNs, quantities, and thus with (known) hazards identified by the HPD Builder, as required by the HPD Open Standard.
 - *Batch Variation.* If there is batch variation, explain the cause of the variation.

Harmonization: This Special Condition has been harmonized with the following:

- Cradle to Cradle Certified™, [Recycled Content Materials Assessment Methodology](http://www.c2ccertified.org/resources/detail/recycled-content-materials-assessment-methodology), February 2022; <http://www.c2ccertified.org/resources/detail/recycled-content-materials-assessment-methodology> (C2C Certified requires recycled content with variable or unknown composition to undergo analytical testing to prove compliance with the C2C Certified RSL and certification program organohalogen restriction. At higher levels of certification, additional testing is required, as defined in the Recycled Content Materials Analyte List (<https://www.c2ccertified.org/resources/detail/recycled-content-materials-analytes-list>)).
- International Living Future Institute, [Declare Manufacturer's Guide](#), October 2018; ("Recycled content should be reported using all known primary ingredients; a CASRN should be reported as applicable", Page 7)
- BIFMA e3 2019 (no specific requirements)

GUIDANCE/ INSTRUCTIONS:

Special Conditions instructions for specific data fields follow; **if there are no instructions for a data field, the requirements of the HPD Open Standard should be followed.** If the HPD Open Standard and Special Conditions instructions are followed, the HPD will not be barred from qualifying for the LEED v4 Material Disclosure and Optimization, Material Ingredients credit, Option 1.

NOTE: Recycled content material of well-defined composition that can be identified by the CAS numbers of the contained chemical substances must be inventoried according to the HPD standard inventory method (the Special Condition for Mixed Recycled Content does not apply).

*Data field auto-fills if using HPD Online Builder

HPD 2.1.1 Data Field	Special Condition Requirements
SECTION 1: SUMMARY	
Content in	Materials and Substances must be listed by the Material Name if applicable (and/



Descending Order of Quantity*	or Substance Name as instructed in Section 2.
Characterized Screened Identified*	“Yes” should be checked if all Standard requirements are met, and all reporting requirements are met below. See notes below where “No” should be marked for one or more indicator.
Inventory and Screening Notes*	Include the following notes: <ul style="list-style-type: none"> ○ “Special conditions applied: [MixedRecycledContent].”

SECTION 2: CONTENT IN DESCENDING ORDER OF QUANTITY

Materials – instructions apply to both Nested Materials and Basic Inventory formats. These fields are customized to this Special Condition guidance. Fields unique to this Special Condition are marked below with a double asterisk**. This mockup shows a typical result of the following instructions:

RECYCLED POLYPROPYLENE ID: Mixed Recycled Content

HAZARD DATA SOURCE: [HPDC Special Conditions Policy](#)

#: 50.0000 - 60.0000 GreenScreen: Not Required RC: PreC NANO: No MATERIAL ROLE: Structure component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
Hazard Screening is not applicable to this Special Condition		

INGREDIENT DESCRIPTION: Recycled Polypropylene resin

ANALYTICAL TESTING: Polymer Testing Lab, LLC uses ISO 14051 approved methods on 1 pound of material per batch to determine the types of polymers present to the 100ppm level.

BATCH VARIATION: Yes, Batch variation is due to inconsistent plastics that are received from the recycler’s customer.

COUNTRY OF ORIGIN: United States

MATERIAL CONTENT NOTES: This disclosure does not provide information on the potential presence of hazardous substances which may be found in certain mixed recycled materials.

Material Name	<ul style="list-style-type: none"> ● Enter all Substances with known CAS RNs, quantities, and thus with (known) hazards identified by the HPD Builder, as required by the HPD Open Standard. Substances are considered “Identified”=“Yes” and “Screened”=“Yes”. ● For all other substances, enter common name.
ID (Identifier):	Enter “Mixed Recycled Content”
Residuals & Impurities**	<p>For substances with the common name but unknown CAS RNs, quantities, and hazards note:</p> <p>Residuals and Impurities = “not considered”</p>



Ingredient Description**	Enter a brief description of the component or part (including its function). Note: The HPD cannot be published without this information.
Analytical Testing (optional)**	If pursuing a Cradle to Cradle Certified™ then answer the following questions: <ul style="list-style-type: none">● Question 1: Is regular, analytical testing performed on the material/ substances?<ul style="list-style-type: none">○ If answers “no”,<ul style="list-style-type: none">▪ Describe how the substance was inventoried (manufacturer/ supplier attestation or other?) in the text box.○ If answers “yes”, include the following information in the analytical testing text box:<ul style="list-style-type: none">▪ list of chemicals and/or elements (including those of a hazardous nature) that are covered by the testing in the text box.▪ test method(s) employed▪ name and accreditation of the lab(s) that perform the testing▪ representative material sample covered by the testing
Batch Variation**	Question 1: Is there any batch variation for the material/substances? <ul style="list-style-type: none">● If answers “yes”<ul style="list-style-type: none">○ Add what are the causes of such variation in the batch variation text box?● If answers “no”<ul style="list-style-type: none">○ Add an explanation of why there is no such variation in the batch variation text box. Note: If the answer to this question is unknown, “No” must be selected for “Screened.”
Country of Origin**	Select the country of origin of the manufacturer/recycler providing the mixed recycled content from the predefined list. Note: This section is optional.
Material Notes**	<ul style="list-style-type: none">● Why is there limited information or a lack thereof?● If no information is available on hazards, include the statement/disclaimer “This disclosure does not provide information on the potential presence of hazardous substances which may be found in certain mixed recycled materials.”
Hazards and Agency(ies) with Warnings	Enter “Hazard Screening not applicable to this Special Condition”
SECTION 3: CERTIFICATIONS AND COMPLIANCE	
No changes to requirements for Special Conditions	
SECTION 4: ACCESSORIES	



No changes to requirements for Special Conditions
SECTION 5: GENERAL NOTES
No changes to requirements for Special Conditions
SECTION 6: REFERENCES
No changes to requirements for Special Conditions

VERSION CONTROL

This document replaces SC MixedRC/2022-07-11. It includes the following updates:

- Updated revision for v2.3 update. No changes to content.