

CRADLE TO CRADLE CERTIFIED MATERIAL HEALTH ASSESSOR CALL



15 November 2022

cradle to cradle
products
innovation
institute

WELCOME AND INTRODUCTIONS

PURPOSE

Increase alignment and consistency in the way Material Health assessments are conducted by providing a venue for open dialogue between our four Material Health assessment organizations

NOTE: This call will be recorded for notetaking purposes. The recording will be posted to the Assessor Resources page once available.

AGENDA

- Welcome and Introductions
- 2023 Goals and Objectives
- Version 4.0 Issues and Challenges
- Open Forum

GOALS AND OBJECTIVES FOR THIS GROUP

2022/2023 MH GOALS

GOALS:

- ☐ To reduce MH Assessor and Certification Holder burden for Version 4.0 certifications while ensuring compliance with V4.0 Standard requirements.
- ☐ To engage with MH Assessors regularly to discuss and gather input on essential or challenging issues that may broadly impact Version 4.0 scaling.

2022/2023 MH OBJECTIVES

Our goals will be achieved through these objectives:

OBJECTIVES:

- ❑ To provide supplemental guidance to the V4.0 Standard on specific topics or requirements.
- ❑ To provide clarifications and interpretations to the Standard, Material Health Assessment Methodologies, or other documents based on known issues of immediate concern or impact.
- ❑ To revise our methodologies in alignment with Cradle to Cradle Principles and based on up-to-date scientific literature and applicable regulations.

Updates and guidance are available for immediate use by ABs.

Longer term objective with likely phased rollout.

VERSION 4.0 ISSUES AND CHALLENGES

FEEDBACK ON V4.0 CHALLENGES / ISSUES

NOTES:

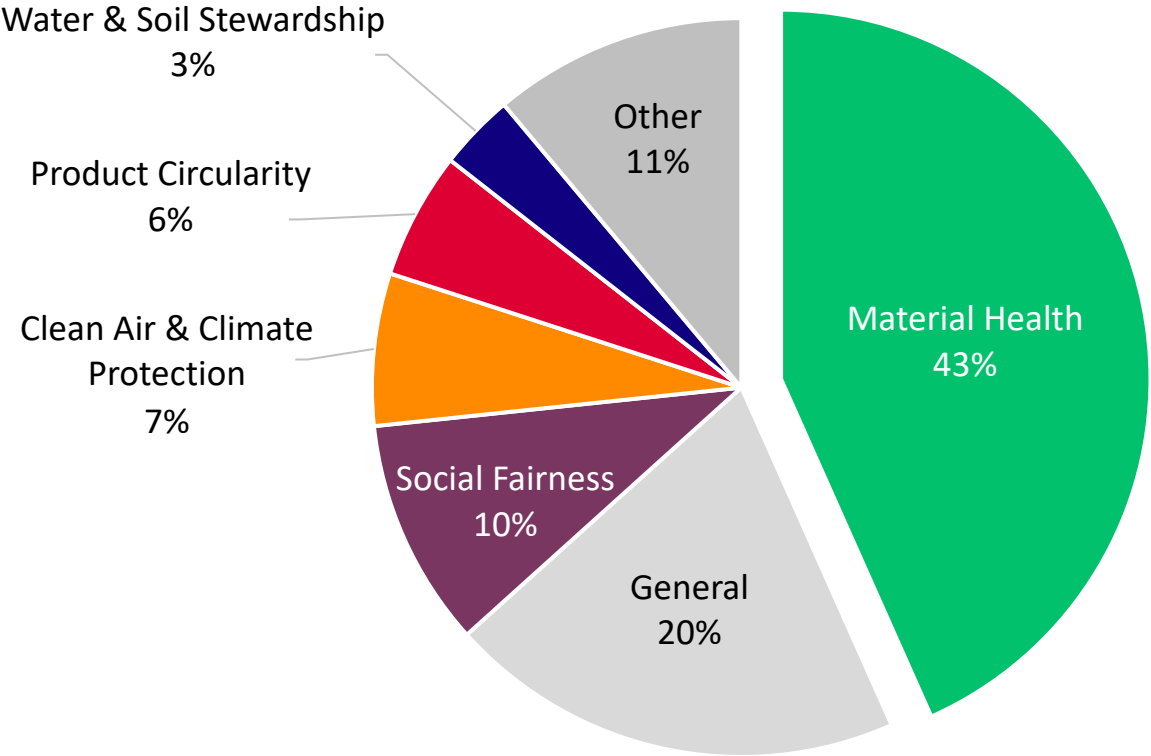
- Leadership requested input/comments on challenges to implementing Version 4.0
- Input received from 4 Assessment Bodies
- Anonymized data presented for group consideration and discussion

This input, along with our discussions, will be used to prioritize C2CPII efforts.

Number of All
Comments by Category

Category	#
Material Health	39
General Issues (e.g., forms, training, V3.1-V4.0 compatibility, cost)	18
Social Fairness	9
Clean Air & Climate Protection	6
Product Circularity	5
Water & Soil Stewardship	3
Other (e.g., site visits, packaging, private label products)	10

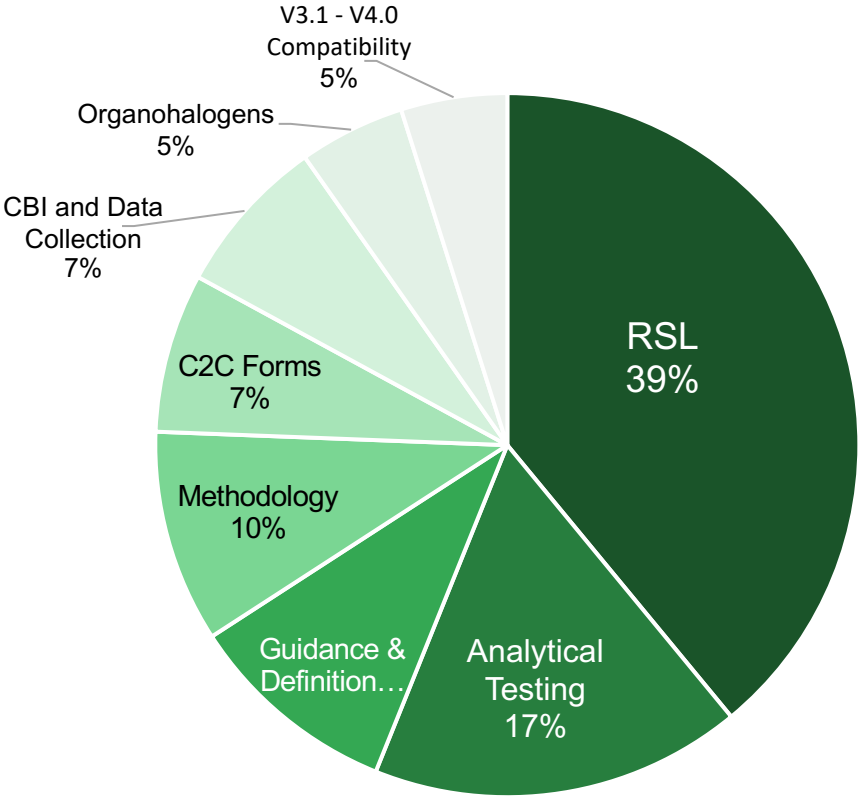
Percentage of All
Comments by Category



Number of MH
Comments by Topic

Topic	#
RSL	16
Analytical Testing	7
Guidance & Definitions	4
Methodology	4
Forms / Templates	3
CBI and Data Collection	3
Organohalogenes and functionally related chemicals of concern	2
V3.1 - V4.0 Compatibility	2

Percentage of MH
Comments by Topic



RSL COMPLIANCE – PATHWAYS

AVAILABLE PATHWAYS:

- Supplier signs C2CPRI RSL Declaration or provides their own equivalent form.
- MH Assessor signs C2CPRI RSL Declaration using attested supplier BoM.

Different information/documentation is required depending on the pathway used.

Details are provided on the following slides.

Cradle to Cradle Certified® Version 4.0 Supplier Restricted Substances Declaration
Version 4.0 Supplier Restricted Substances Declaration
Revised 1 July 2022

Supplier Information

Company:
Address:
Contact Name:
Contact Title:
Contact Phone:
Contact Email:

Material Information

Material Name:
Material Number:
Material Type:
Affiliated Part/Material/Product Name*
Affiliated Part/Material/Product Number*
Affiliated Part/Material/Product Type*

Supplier Information

Supplier company name:
Manufacturing address:
Manufacturing country:

Instructions for applicant: This form must be completed for each part or material that is a homogeneous material within the product. This typically includes all chemical composition data for the supplied part, material, or product.

Instructions for supplier: Please provide the following information:
• For products that are a single homogeneous material, list all part numbers and material types.
• For multi-material products, list all part numbers and material types.

Product/part/material trade name:

Bill of Materials: Product Composition

Line #	Part, material, or chemical (trade name, grade, part number, and/or chemical name)	Chemical Abstract Service (CAS) number	% of total weight (indicate ranges if applicable)	Function (with material)
1				
2				
3				
4				
5				
6				
7				

Cradle to Cradle Certified® Version 4.0 Supplier Restricted Substances Declaration
Version 4.0 Supplier Restricted Substances Declaration
Revised 1 July 2022

Notes:

- Use this form to declare compliance with the 1 July 2022 update to the Cradle to Cradle Certified Products Standard Version 4.0 Restricted Substances List (RSL).
- The previous version of this form is required for use when declaring compliance with the 2021 RSL.

1. SUPPLIER INFORMATION:

Company Name:
Address:
Contact Name:
Contact Title:
Contact Phone:
Contact Email:

2. MATERIAL INFORMATION:

Material Name:
Material Number:
Material Type:
Affiliated Part / Material / Product Name*
Affiliated Part / Material / Product Number*
Affiliated Part / Material / Product Type*

*If applicable, Note that a separate declaration must be provided for each homogeneous material in the supplied part, material, or product.

Page 1 of 3

[Signature]
SIGNATURE OF APPROPRIATE COMPANY REPRESENTATIVE

SIGNATURE OF APPROPRIATE COMPANY REPRESENTATIVE

HEAD

MATERIALS USING

ATION PROVIDED

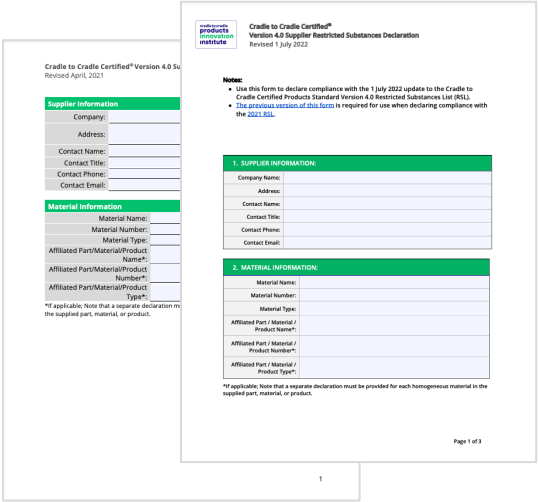
TION USING

ON PROVIDED

RSL DECLARATIONS – SUPPLIER PATHWAYS

ORIGINAL COMPLIANCE PATHWAY – C2CPII FORM:

- Supplier signs [Cradle to Cradle Certified Version 4.0 Supplier Restricted Substances Declaration](#).
- 2021 or 2022 Update form is acceptable.
- This form contains all required fields for the declaration.
- Fastest pathway for C2CPII to review.



The image shows the 'Cradle to Cradle Certified® Version 4.0 Supplier Restricted Substances Declaration' form. It is a multi-page document. The first page includes a 'Supplier Information' section with fields for Company, Address, Contact Name, Contact Title, Contact Phone, and Contact Email. Below this is a 'Material Information' section with fields for Material Name, Material Number, Material Type, Affiliated Part / Material / Product Name, and Affiliated Part / Material / Product Type. A note at the bottom states: 'If applicable, Note that a separate declaration must be provided for each homogeneous material in the supplied part, material, or product.' The second page is titled '1. SUPPLIER INFORMATION' and contains fields for Company Name, Address, Contact Name, Contact Title, Contact Phone, and Contact Email. The third page is titled '2. MATERIAL INFORMATION' and contains fields for Material Name, Material Number, Material Type, Affiliated Part / Material / Product Name, and Affiliated Part / Material / Product Type. A note at the bottom states: 'If applicable, Note that a separate declaration must be provided for each homogeneous material in the supplied part, material, or product.' The form is labeled 'Page 1 of 3' at the bottom right.

ALTERNATE COMPLIANCE PATHWAY – SUPPLIER FORM:

- For suppliers not willing to sign RSL declaration, C2CPII will now accept statements of conformance from the supplier in their own format.
- To be accepted, the statement of conformance must provide the same information requested on the C2CPII form (see checklist on next slide).



The image shows a template for a 'SUPPLIER RSL DECLARATION USING SUPPLIER FORMAT'. It includes a section for 'COMPANY LETTERHEAD AND CONTACT INFO' with a logo placeholder. Below this is a section for 'REQUIRED INFORMATION PROVIDED' with a signature line. The signature line is labeled 'SIGNATURE OF APPROPRIATE COMPANY REPRESENTATIVE'.

Note: Language included that is not on the C2CPII form will need to be reviewed to determine conformance.

RSL DECLARATIONS – SUPPLIER FORM CHECKLIST

1. Is the declaration on company letterhead?

- Letterhead generally includes an individual's contact info and an official company logo with corporate address, where applicable, to acknowledge that the business itself is represented.

2. Does the declaration provide the same supplier and material information requested in the C2CPH form?

- SUPPLIER INFORMATION: Company name, address, and contact information
- MATERIAL INFORMATION: Material name, number, type, and affiliated part, product number, product type

3. Does the declaration specify the C2CPH RSL?

- 2021 or 2022 Update version is acceptable.
- Cradle to Cradle Certified Products Standard Version 4.0 Restricted Substances List (RSL) - Effective July 1, 2022, OR FILENAME: "REF_Restricted_Substances_List_(RSL)_FINAL_070122"

4. Does the declaration specify which RSL lists apply?

- Core List, BERM, Textile Materials, Children's Products, Formulated Consumer Products, Footwear Apparel & Jewelry Products, Cosmetics and Personal Care Products

5. Positive or Negative Declaration:

- Does the declaration indicate that NONE of the chemicals present on the RSL have been intentionally added to, or are a known contaminant in, the homogeneous material?
- Does the declaration indicate that ANY of the chemicals present on the RSL have been intentionally added to, or are a known contaminant in, the homogeneous material? If yes, the supplier must provide a list of the chemical names, CAS numbers, and concentrations of all listed substances.

6. Attestation:

- Does the declaration use the same attestation language as C2CPH's form?
- Is the declaration signed by an appropriate company representative with relevant knowledge, responsibility, and authority? Typed names are unacceptable, signature must be provided

7. Additional Language:

- Does any additional language not part of the original C2CPH form negate conformance or contradict the declaration, attestation, or signature? Request by C2CPH will be required.

RSL DECLARATIONS – MH ASSESSOR DECLARATION

MH ASSESSOR DECLARATION – C2CPII BoM:

- Supplier signs attested [Version 4.0 Supplier Bill of Materials Form - beta version](#) indicating that the list is complete and represents all intentional inputs and known chemicals.
- MH Assessor reviews BoM, confirms RSL compliance*, and signs the [C2CPII V4.0 Supplier Restricted Substances Declaration](#).

The image shows three overlapping forms. The top form is the 'Cradle to Cradle Certified® Version 4.0 - Supplier Bill of Materials' with sections for 'Supplier Information' and 'Material Information'. The middle form is the 'Cradle to Cradle Certified® Version 4.0 Supplier Restricted Substances Declaration'. The bottom form is a 'Bill of Materials: Product Composition' table with columns for 'Line #', 'Part, material, or chemical (trade name, grade, part number, and/or chemical name)', and 'Chemical Abstract Service (CAS) number'.

* NOTE: MH assessor is required to review and check for RSL compliance in all cases.

MH ASSESSOR DECLARATION – SUPPLIER BoM:

- For suppliers not willing to sign C2CPII’s BoM form, C2CPII will now accept BoMs from suppliers in their own format.
- To be accepted, the supplier BoM must provide the same information requested on the C2CPII form (see checklist on next slide).
- MH Assessor reviews BoM, confirms RSL compliance*, and signs the [C2CPII V4.0 Supplier Restricted Substances Declaration](#).

The image shows a template for a supplier's own Bill of Materials form. It includes a 'COMPANY LETTERHEAD AND CONTACT INFO' section, a 'SUPPLIER BILL OF MATERIALS USING SUPPLIER FORMAT' section, and a 'REQUIRED INFORMATION PROVIDED' section. At the bottom, there is a signature line labeled 'SIGNATURE OF APPROPRIATE COMPANY REPRESENTATIVE'. To the right, there are two overlapping images of the 'Cradle to Cradle Certified® Version 4.0 Supplier Restricted Substances Declaration' form.

BILL OF MATERIALS – SUPPLIER FORM CHECKLIST

1. Is the BoM on company letterhead?

- Letterhead generally includes an individual's contact info and an official company logo with corporate address, where applicable, to acknowledge that the business itself is represented.

2. Does the BoM provide the same supplier and material information requested in the C2CPH form?

- SUPPLIER INFORMATION: Company name, address, and contact information
- MATERIAL INFORMATION: Product/part/material trade name.

3. Does the BoM provide all relevant chemical/ingredient information?

- Chemical name, CAS number, % of total weight, function, etc.

4. Is the information provided complete according to C2CPH requirements?

- Does the BoM state that all parts, mixtures, and substances contained in the product, including all intentional inputs and any known nonfunctional or unintentionally added chemicals or materials (e.g., contaminants, byproducts, impurities) are listed?

5. Attestation:

- Does the declaration use the same attestation language as C2CPH's form?
- Is the declaration signed by an appropriate company representative with relevant knowledge, responsibility, and authority? Typed names are unacceptable, signature must be provided

7. Additional Language:

- Does any additional language not part of the original C2CPH form negate conformance or contradict the BoM, attestation, or signature? Request by C2CPH will be required.

RSL COMPLIANCE – USEFUL RESOURCE

Notes:

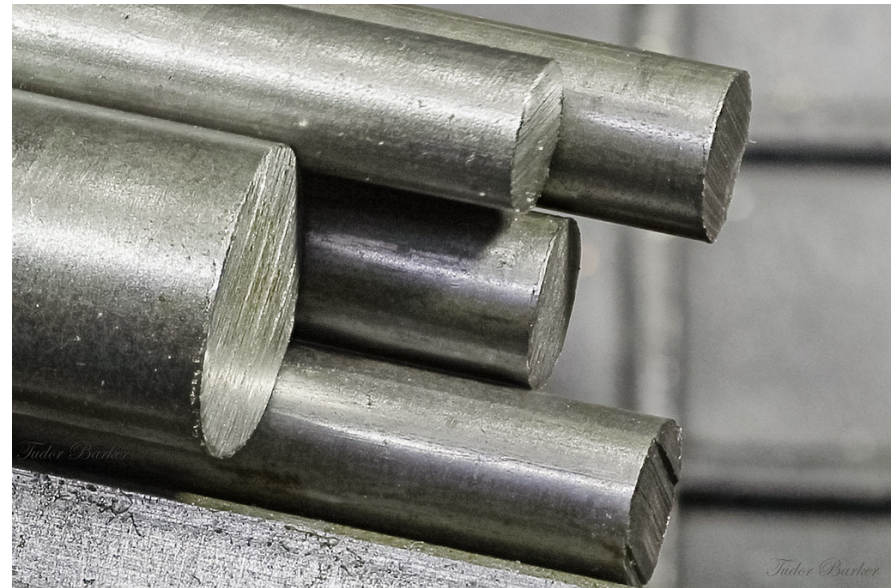
- [Version 4.0 Supplier Bill of Materials Form with RSL Lookup - beta version](#)
- Contains lookup function for 2021 RSL using Pharos data (no subscription required).
- Restricted substances identified based on chemical name and CAS number.
- This form may be useful for Suppliers to scan for restricted substances.
- MH Assessors need to verify RSL compliance regardless of chemicals identified on submitted this form.

Cradle to Cradle Certified® Version 4.0 - Supplier Bill of Materials Worksheet		Applicant Information	
<i>Instructions for applicant:</i> This form must be completed by each supplier that provides parts, materials, or chemicals for the product being assessed for certification. A separate form should be completed for each part or material. The goal is to obtain chemical level data on all intentional inputs and known contaminants contained in each homogeneous material within the product. This typically requires collecting data from multiple tiers of the supply chain. It should not be assumed that formulators and similar have access to all chemical composition data for their products.		Applicant company:	Company A
		Applicant company contact:	Contact 1
		Applicant product(s) being assessed for certification:	Product 2022
Supplier Information			
Supplier company name:	Supplier 1	Contact name/title:	
Manufacturing address:	Address 1	Email:	
Manufacturing country:	Country 1	Phone:	
<i>Instructions for supplier:</i> Please provide the following information for all parts, mixtures, and substances contained in your product, including all intentional inputs and any known nonfunctional or unintentionally added chemicals or materials (e.g., contaminants, byproducts, impurities).			
• For products that are a single homogeneous material, list chemical names and identifiers (e.g. CAS) if you are a chemical manufacturer, or material trade names and grades if you are a formulator or similar.			
• For multi-material products, list all part numbers and/or material trade names/grades as applicable.			
Product and Material Type		RSL Lookup Functionality	
Product/part/material trade name:	Material ABC		
Select All Applicable Product and Material Types from the checkboxes below:	<div><input type="checkbox"/> Biological Nutrient Materials <input type="checkbox"/> Children's Products <input type="checkbox"/> Formulated Consumer Products <input type="checkbox"/> Textile Materials <input type="checkbox"/> Footwear Apparel Jewelry</div>	<div>RSL Lookup Instructions: Select the appropriate product and material types from the options to the left and enter chemical identity information in the table below. Full descriptions for product and material types can be found on the 'Overview of Form' tab. Based on the selected product and material types, chemicals will be highlighted when their names or CAS numbers appear on the core or applicable supplementary lists. Supplementary lists that do not apply to the selected product and material types will be grayed out.</div> <div>Example of highlighted substance: <div>Arsenic</div><div>7440-38-2</div><div>Core List</div><div>Name CAS</div></div>	<div>Notes on RSL Lookup Functionality CAS numbers and chemical names will trigger names in the supplementary list. An 'X' in RSL Lookup indicates non-compliance with the RSL. Material names can be used as a guide. Many chemicals on the RSL have maximum use levels (%). Chemicals that exceed these levels are non-compliant with the RSL. Material names can be used as a guide to determine RSL compliance.</div>

RSL DECLARATION FOR ALLOYS – CHALLENGES

SUMMARY OF INPUT RECEIVED:

- Alloy manufacturers are not willing/not able to share full composition up to 100 ppm or sign external declarations.
- Testing for full composition is possible but not actionable due to prohibitive costs.
- Mill certificates and publicly available databases can provide the necessary information per the standard's requirements



RSL DECLARATION FOR ALLOYS

C2CPHII DECISION REGARDING ALLOYS:

- We have determined that mill certificates (mill test reports) will be accepted for full material disclosure, although they do not necessarily provide data to 100 ppm.
- Mill test reports contain valuable composition information, including material grade and chemical analysis.
- Also, composition information from the resources cited in V3.1 (www.matweb.com, www.efunda.com, and www.copper.org) can be used to define the alloy composition for Version 4.0 applications.

RSL COMPLIANCE PATHWAYS FOR ALLOYS:

Supplier Declaration:

- ☐ Supplier fills out C2CPHII RSL Declaration.

OR

- ☐ Supplier provides a statement of conformance in their own format.

OR

MH Assessor Declaration:

- ☐ MH Assessor reviews the mill certificate and any additional information, confirms RSL compliance, and signs the RSL declaration.

GMAM – CHALLENGES

SUMMARY:

- Current limit for Chromium VI is based on an outdated version of the Toy Directive (2009/48/EC):
 - 0.2 mg/kg listed in GMAM.
 - 0.053 mg/kg currently listed in 2009/48/EC.
- 2009/48/EC is not applicable to construction products and the referenced analytical methodologies are not in scope for concrete materials.
- Regulation (EC) 1907/2006 specifies an acceptable level for Chromium VI in cement.

NEWLY ACCEPTED MAX LEVEL:

Chromium VI new accepted test level for cement:

- ❑ The level of 2 mg/kg (0,0002%) for cement per Regulation (EC) 1907/2006 using EN 196-10 is acceptable instead of the 0.2 ppm level stated in the GMAM.

ANALYTICAL TESTING – CHALLENGES

SUMMARY OF INPUT RECEIVED:

- Labs lack testing capabilities (i.e., unable to test for certain analytes or at necessary detection limits).
- Multiple labs required to cover all analytes (none have full capabilities for all analytes).
- Cost prohibitive for small companies.
- Analytes list is difficult to use (not all required information is in one place).

Summary of material types and number of substances to test according to C2C standard requirements.

Standard Requirement	Material	Substances to be Tested	# of Substances*
RSL and Organohalogen Compliance for Recycled Content	Metal (unknown alloy & grade)	C2C Restricted Substances Analyte List	5
	Glass		5
	Paper (re-pulped)		108
	Polymers		213
	Wood (mixed)		237
	Wood (clean)		48
	Textiles including carpet and leather		240

*Silver level testing requirements from 2021 RSL list. These lists include substance groups that contain multiple analytes to test. The number of analytes for virgin material will be lower since SVHC testing isn't required.

ANALYTICAL TESTING – C2CPII OBSERVATIONS

SUMMARY:

- Several pilot projects initiated with 4 or 5 labs:
 - TÜV Rheinland, SGS, VITO, BV, Eurofins
- Labs communicate excellent testing capabilities for the materials/analytes in pilot projects (e.g., TÜV Rheinland states >97% coverage for all analytes).
- Pilot with BV on PET polymer successfully conducted (Silver level analytes tested).

CHALLENGES:

- For some pilots, we've had difficulties coordinating with non-responsive labs.
- Capabilities for 4-nitrobiphenyl are not available.



*We want to hear your perspective on this topic.
What challenges have you faced and what
successes have you experienced?*

ANALYTICAL TESTING – DISCUSSION NOTES

NOTES:

- Text

MHAM REVISION – GOAL AND SCOPE

GOAL:	To update and revise MHAM based on current scientific knowledge and landscape
DOCUMENTS IN SCOPE:	Material Health Assessment Methodology and all supplemental methodologies: MHAM, Exposure, Recycled Content (including analytical testing frequency), Mixture Hazard, Colorants, Biological Materials, Geological Materials, Polymer, Externally Managed Components.
OUT OF SCOPE:	RSL, Reference Documents, Policies, Cradle to Cradle Certified Product Standard
CHANGES:	<p>LEVEL 1 – Minor edits, corrections, or updates to enhance clarity or usability. <i>Not anticipated to affect rating criteria.</i></p> <p>LEVEL 2 – Major changes or additions to update the overall science/state of the art. <i>Anticipated to affect hazard data interpretation and rating criteria.</i></p>

WORKING TOWARDS OUR OBJECTIVES

2022/2023 MH OBJECTIVES

Our goals will be achieved through these objectives:

OBJECTIVES:

- ❑ To provide supplemental guidance to the V4.0 Standard on specific topics or requirements.
- ❑ To provide clarifications and interpretations to the Standard, Material Health Assessment Methodologies, or other documents based on known issues of immediate concern or impact.
- ❑ To revise our methodologies in alignment with Cradle to Cradle Principles and based on up-to-date scientific literature and applicable regulations.

Updates and guidance are available for immediate use by ABs.

Longer term objective with likely phased rollout.

METHOD OF APPROACH

NOTES:

- Supplemental guidance, clarifications, and interpretations will be announced to this group via:
 - Email, Assessor calls, Assessor Resources webpage.
- Special projects will be used to research options and deliver output.
- GOAL: Resolve priority issues quickly where possible while taking appropriate time when required to conduct the necessary research.

Special Projects, Examples:

Project	Estimated Timeline
Applicant BoM Form Improvement	6 - 8 weeks
Recycled Content Analyte Reduction	1 - 2 months
MHAM Revision	Q1 - Q4 2023
MH Online Training	Q1 2023

OPEN FORUM

Q&A

cradle to cradle
products
innovation
institute



2023 SCHEDULE

2023 MH ASSESSOR CALL SCHEDULE

SUMMARY:

- Calendar invitations have been sent.
- Agenda topics will be sent prior to each meeting.
- Send additional agenda items to Chris Helt chelt@c2ccertified.org.

MH Assessor Call Schedule (2023)

Meeting:	Day:	Date:	EU (CET):	US (ET):
Q1 - 2023	Wed	01 - Feb - 2023	4:00 PM - 5:30 PM	10:00 AM - 11:30 AM
Q2 - 2023	Wed	12 - Apr - 2023	4:00 PM - 5:30 PM	10:00 AM - 11:30 AM
Q3 - 2023	Tue	11 - Jul - 2023	4:00 PM - 5:30 PM	10:00 AM - 11:30 AM
Q4 - 2023	Wed	08 - Nov - 2023	4:00 PM - 5:30 PM	10:00 AM - 11:30 AM

THANK YOU

cradle to cradle
products
innovation
institute

