



RMS Fundamentals: Everything You Need to Know to Prepare for Public Comment Part 1 of 2

October 28, 2020



Overview: Part 1

The RMS approach

- Types of claims
- Definitions Post consumer Post industrial
 - Average content claims
 - Mass Balance claims

Please submit questions (or comments) via "chat"

Questions addressed as time permits

Look for FAQ's at **RMScertified.com**



The Recycled Material Standard (RMS)

Our objective: **To advance the use of recycled materials**

- Multi-material, chain of custody standard that will serve as an assurance mechanism for third-party certification of recycled content claims.
- A platform for companies to demonstrate their support for investments in recycling technology.



Building on Existing Standards and Requirements

Seeking alignment with others where possible, including:

- Other standards
 - Trade associations
- FTC Green Guides
- Other NGO's

Ensuring messaging is clear across the supply chain and to consumers, including testing with:



-

Consumers

Supply chain participants



Project Scope

The Recycled Material Standard (RMS) is being developed as:

- A project of GreenBlue with support from NSF International
- Third party standard (independently audited)
- Voluntary, market based tool to address challenges within recycling value chain
 - A framework for multiple materials; starting with plastics module
 - Incorporates multiple control systems for claims
 - Average content
 - Mass balance allocations
 - Certificate trading Attributes of Recycled Content (ARCs)
 - Developed for participants in North America (US, Canada, Mexico)



Corporate Commitments for Recycled Plastics



Signatories of the <u>Global</u> <u>Commitment</u> are asked to "set an ambitious 2025 recycled content target across all plastic packaging used"

Source: https://www.ellenmacarthurfoundation.org/ assets/downloads/13319-Global-Commitment-Definitions.pdf



The <u>US Plastics Pact</u> has announced a target of **30% recycled** or biobased content in packaging by 2025

Source: https://usplasticspact.org/launch-august2020/



Why Do Companies Seek Certification?





Recycled Material Definitions

We started with ISO definitions

Experience in paper industry indicates ISO does not offer enough clarity

Terms should be material specific

We refer to "post consumer" (PC) and "post industrial" (PI)

Primary challenges within definitions:

- Post consumer: "returns from distribution chain"
- Post industrial: "the same process"



International Organization for Standardization (ISO) Definitions

- *Recycled Content*: Comprised of pre-consumer and/or post-consumer material that is used as a raw material in the manufacture of products.
- Pre-Consumer Recycled Content: Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed with the same process that generated it.
 - Post-Consumer Recycled Content: Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.



Source: ISO 14021 Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)









Environmental Protection Agency (EPA)

Recovered fiber includes manufacturing wastes such as:

- Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets)
- Examples include:
 - Envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes
 - Butt rolls, mill wrappers, and rejected unused stock
 - Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.



Environmental Protection Agency (EPA)

- Post-consumer fiber: Paper, paperboard, and fibrous wastes from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; and all paper, paperboard, and fibrous wastes that enter and are collected from municipal solid waste. Postconsumer fiber does not include fiber derived from printers' over-runs, converters' scrap, and over-issue publications.
- Mill broke: any paper waste generated in a paper mill prior to completion of the papermaking process. It is usually returned directly to the pulping process. Mill broke is excluded from the definition of "recovered fiber."



Definitions Matter

We have aimed for:

- Material specific definitions (for plastics)
- Clear, supporting examples
- A level playing field that does not favor (or disfavor) integration

All certified companies will be subject to same rules

















The RMS post industrial plastic definition is partly defined by **phase transition**



Control Systems and Claim Types

Control systems vary in level of control and supply chain flexibility

Physical	Single %	Rolling	Single Site	Multi Site	Book & Claim
Separation	(batch level)	Average	Mass Balance	Mass Balance	(certificates)

Higher Control

"Higher Claim"

Higher Flexibility

"Lesser Claim"

Companies should strive for higher level claims





Claims Governance

The Federal Trade Commission (FTC) governs environmental marketing claims in the US

Claims should be true and substantiated

Certified claims should be based on standards developed and maintained by a voluntary consensus body

Cannot be deceptive to consumers



Chain of Custody Systems

CoC systems are a traceable connection between origin of materials and final product

There must be an unbroken chain of organizations, independentlycertified, **covering every change in legal ownership** – from the point of origin up to the point where a product is finished (and labeled if desired).



Sources must meet definitions within standard for acceptable materials. Each entity must be independently certified to maintain CoC.



Scope of Certifications

Single Site

Can cover multiple processing steps (e.g. for integrated manufacturing)

Multi Site

More than on facility under same legal ownership (e.g. med-large companies with more than one plant)

Group

Several "small" entities operating under a single certificate

Product Groups:

Define which products are eligible for claims

Define control system or accounting method



Multi-site Certification

Integrated converter operating a multi-site certificate



film, shopping bags, film scrap. Since the "film scrap" is included in

the scope, it can be sold as a certified product

** **Control method**: rolling average percentage



Group Certification

Chemical recyclers operating plants under a group certificate





* Products included in scope: pyrolysis oil, wax, char ** **Control method**: mass balance



Average Content

Percentage system example: 30% of input is certified recycled material





Mass Balance Allocation

- Materials are accumulated through an accounting process and then allocated to output products
- The amount of certified output sold cannot exceed the input quantity
- Can be applied across multiple sites within an organization under some standards
- Accumulated materials may have an expiration date

Different standards use similar concepts but different terms

Applied to a Single Site "closed mass balance" "credit claim"

Applied to more than one site "open mass balance" "cross site credit claim" "qualified claim"



Mass Balance

Mass balance allocation example; 30% of input material is certified



* Accounting system must account for process losses
** cf = conversion factor



Mass Balance (cont'd)

Mass balance accounting; systems must account for yield losses

	Opening balance (tons of PE resin)	Input materials (tons PE scrap)	Produced materials (tons PE resin)	Sold materials (tons PE resin)	Expired units (tons PE resin)	Ending balance (tons PE resin)
Mar	1,540	1,000	650	600	0	1,590
Apr	1,590	900	585	625	0	1,550
May	1,550	1,100	715	725	0	1,540
Jun	1,540	1,000	650	800	0	1,390
Jul	1,390	1,100	715	775	0	1,330
Aug	1,330	900	585	750	0	1,165
Sep	1,165	1,200	780	650	0	1,295

March: 1540 opening + 650 produced – 600 sold – 0 expired = 1590 ending balance Conversion factor between scrap and resin = 0.65



Mass Balance (cont'd)

Mass balance accounting; systems must account for yield losses

	Opening balance (tons of PE resin)	Input materials (tons PE scrap)	Produced materials (tons PE resin)	Sold materials (tons PE resin)	Expired units (tons PE resin)	Ending balance (tons PE resin)	
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Apr	1,590	900	585	625	0	1,550	
May	1,550	1,100	715	725	0	1,540	
Jun	1,540	1,000	650	800	0	1,390	
Jul	1,390	1,100	715	775	0	1,330	~
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March: 1540 opening + 650 produced – 600 sold – 0 expired = 1590 ending balance Conversion factor between scrap and resin = 0.65



Critical Enabler

Mass balance certification systems will be a critical enabler for chemical recycling



derived from recycled materials

for a 100% certified claim



The RMS Promise

GreenBlue's Recycled Material Standard (RMS) promises to be the most comprehensive standard for recycled materials

Developed through voluntary consensus process

- Multi-stakeholder advisory group
- Field testing
- Public comment (pending)

Material specific definitions

- Post consumer
- Post Industrial
- Product group designations

Source: https://resource-recycling.com/recycling/2020/01/12/ setting-the-standard/

Multiple control systems

- Single % Claims
- Rolling average % claims
- Mass balance claims
- Commodity trading (ARC system)

Scope boundary options

- Single site
- Multi site
- Group certification

Source: https://sustainablepackaging.org/ advancing-the-use-of-recycled-materials/



Ambitious Commitments

We are providing the supply chain with multiple solutions to achieve ambitious commitments

Year	Avg Volume Recycled Content	Mass Balance	ARCs	Total (% of goal)
2021	500 mt	0 mt	500 mt	1,000 (33%)
2022	700 mt	300 mt	500 mt	1,500 (50%)
2023	900 mt	500 mt	500 mt	1,900 (63%)
2024	1200 mt	800 mt	500 mt	2,500 (83%)
2025	1500 mt	1000 mt	500 mt	3,000 (100%)

Example:

Company AtoZ has a commitment to utilize 30% recycled content by 2025.

They use 10,000 mt of plastic per year

Goal = 3,000 tons recycled material

RMS helps support progress on goals. In this scenario, AtoZ has established a long-term agreement with an ARC producer which enables that company to invest and process more post consumer materials.



Overview: Part 2

Quick recap on part 1 – certification claims

Retiring certificates and making claims

- Defining the Attributes of Recycled Content (ARC) system
- Additionality Tests Existing processors Reinvestment criteria
- The ARC Registry

Public comment period

Nov. 9 – Dec. 18, 2020

Visit **RMScertified.com** for more information







For more information:

RMScertified.com