

# Measuring Recycled Content of Automotive Products

Guidance Document

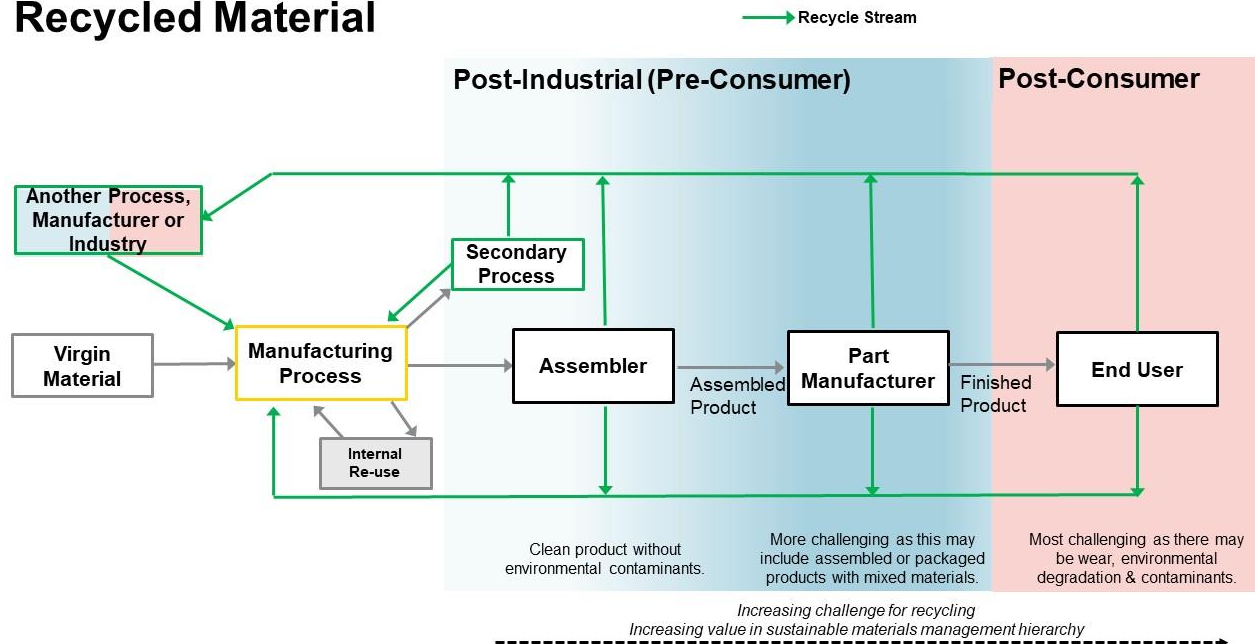
September 2021

## Established Scope

- The Suppliers Partnership for the Environment (SP) Materials Efficiency Work Group (MEWG) works to promote collaboration amongst automotive manufacturers and suppliers to increase use of sustainable practices, processes, and materials in the production and content of vehicles, and to incentivize sustainable innovation.
- While there are established definitions of certain key terms related to the topic of sustainable materials that have been developed by other organizations, investigation by SP indicates a range of definitions and interpretations of such terms may be in use across industry today. We are not aware of any organization that has developed a commonly accepted definition of key terms for measuring the use of sustainable materials in the automotive industry to date.
- Therefore, an SP MEWG Sustainable Materials Definitions Sub-team was formed with the objective to develop straightforward common definitions of key terms related to sustainable materials to minimize duplication of effort and promote consistent approaches in communications with suppliers, sustainability reporting and measuring industry progress.
- SP is collaborating with AIAG in the development of these definitions to promote common, consistent language across industry.
- The purpose of this guidance document is to outline a common industry-supported definition and approach for measuring recycled content of automotive products consistent with those approaches outlined in other standards.

**Next Steps:** Going forward, the SP MEWG Sustainable Materials Definitions Sub-team intends to build on learnings from this process to address common definitions for additional aspects of sustainable materials where needed.

## Recycled Material



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- Excluded is **internal re-use** of materials reclaimed within the same process that generated it (considered same as virgin) without any change to composition or form, only changes to size. This is true even if the material resizing is done by a third-party or as a contracted service.
  - Regrind**<sup>1</sup> and **rework**<sup>2</sup> alone do not count as recycled content if they are being used to produce the same product or component. They will count as recycled content if they are used to produce a different product or component. They will also count if they go through another process (secondary process) prior to use with the same product or component.
- A **secondary process** may include mechanical or advanced recycling processes, alloying, contamination removal, or blending and represents more processing than simply resizing a segregated material (size reduction). Materials processed in this way will have some change in form or composition.

#### Recycled Material includes:

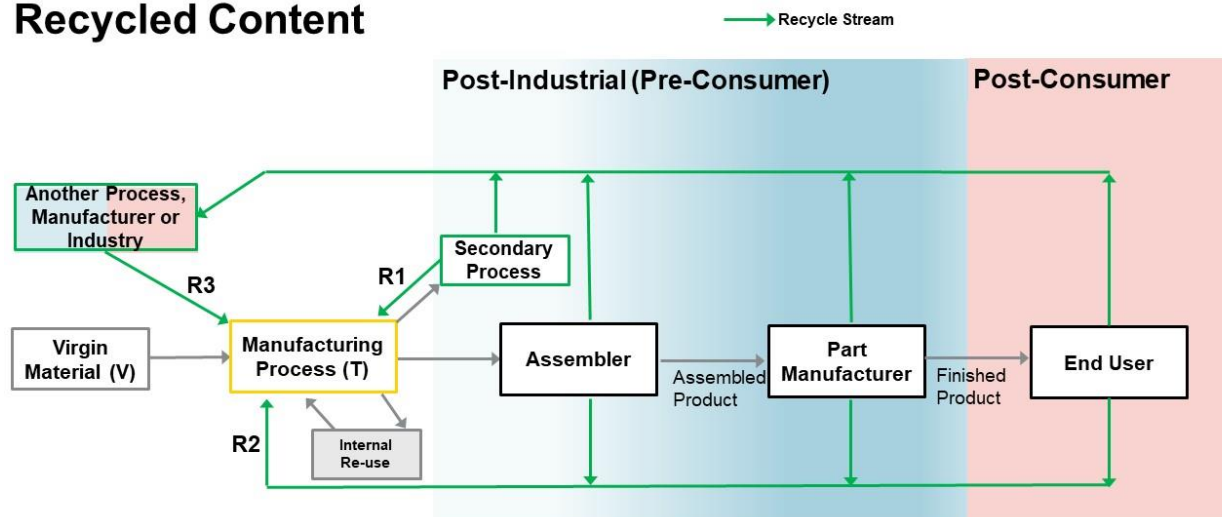
- Post-Industrial (Pre-Consumer):** Material diverted from the waste stream during a manufacturing process that would not be saleable as a product. Included is reprocessed material from recovered products that left a manufacturing operation in saleable condition but were never sold to an end consumer or put into use for their intended purpose (pre-consumer). Excluded is re-use of materials reclaimed within the same process that generated it (considered same as virgin).
- Post-Consumer:** Material discarded by an end consumer. Included is any 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.

<sup>1</sup> **Regrind:** Recovered material that has been used at least once in a manufacturing process and has gone through a size reduction process to be made into smaller pieces for reuse into the same product from which it was generated.

<sup>2</sup> **Rework:** Materials or products that did not meet specifications upon exiting a process and require one or more tasks to be completed to correct the errors before entering the next processing step or finished goods inventory.

*Note: The above flowchart is a simple representation of what can be a complex system and is intended for illustrative purposes only.*

## Recycled Content



$$X (\%) = \frac{R1+R2+R3}{V+R1+R2+R3}$$

Total Material Input to Process.  $T=V+R1+R2+R3$

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### Sources of Recycled Material content may include:

- **R1:** Material that has gone through another process (secondary process) prior to use with the same product, component, or manufacturing process. It is scrap<sup>3</sup> that is sent to a separate process and brought back in a different form and/or with composition adjustments.
- **R2:** Material recovered from a downstream manufacturing process or end user of the same or another product that is used in a manufacturing process.
- **R3:** Recycled portion of purchased raw material, including materials recovered or generated by other industries<sup>4</sup>. Only the recycled portion of a purchased raw material may be counted when material consists of recycled and virgin content.

**Note 1:** To determine recycled content of a multi-material product, each material that goes into a product should be evaluated individually and the result of all materials summed to determine the total proportion of recycled material in the finished product. Companies should be transparent in reporting their calculation methods, including any estimation or assumptions, and maintain data necessary to substantiate reporting for each material.

**Note 2:** The proportion of post-industrial (PIR) and / or post-consumer (PCR) recycled material may also be calculated separately, if necessary.

- Post-Industrial (PIR) recycled content represents the total proportion, by mass, of post-industrial input materials incorporated in the process.
- Post-Consumer (PCR) recycled content represents the total proportion, by mass, of post-consumer input materials incorporated in the process.

<sup>3</sup> **Scrap:** Rejected or discarded material generated by a manufacturing process that is useful only after it is reprocessed.

<sup>4</sup> **Other industries** may include raw material suppliers, salvage/scrapyards, and others.

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## **Conclusion**

The purpose of this document is to outline a common industry-supported definition and approach for measuring recycled content of automotive products. This document is a simple representation of what can be a complex system and is intended for illustrative purposes only. We fully expect that this document will not answer all questions a company may have but it is intended to provide a common industry-supported framework for determination of recycled content.

## **References for Further Information**

- [FTC Green Guides](#), Federal Trade Commission (FTC), 2012.
- [GRI 301: Materials](#), Global Reporting Initiative (GRI), 2016.
- [GRI Standards Glossary](#), Global Reporting Initiative (GRI), 2018.
- [ISO 14021:2016](#), Environmental labels and declarations — Self-declared environmental claims, ISO - International Organization for Standardization, 2016.
- [Automobiles: Sustainability Accounting Standard](#), SASB, 2018.
- [Auto Parts: Sustainability Accounting Standard](#), SASB, 2018.
- [Enabling A Circular Economy For Chemicals With The Mass Balance Approach](#), The Ellen MacArthur Foundation, 2020.
- [Interpreting pre-consumer recycled content claims](#), UL, 2020.