

RECOUP PACKAGING RECYCLABILITY: ASSESSMENTS AND TESTING

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RECOUP

Leading a more circular
plastics value chain



RECOUP Packaging Recyclability: Assessments and Testing

RECOUP is the UK's leading independent authority and trusted voice on plastics resource efficiency and recycling. As a registered charity, supported by our members, RECOUP aim to:

Inspire collaboration by connecting the whole plastics value chain

Lead the continued development of a plastic circular economy, resource efficiency, recycling and reuse

Educate the public and businesses on all aspects of plastics recycling and resource efficiency

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Testing

As a service to its members, RECOUP undertake pack tests to provide information concerning the recyclability of packaging.

Testing can include:

- **Size** - This impacts the recovery of the sample, if too small can be lost during sorting, if too big or heavy may not be detected.
- **Colour** – Certain colours can impede recovery by not being recognised by the Near Infrared.
- **Mixed or laminated materials** – combined/layered polymer types can confuse the Near Infrared as they set to detect certain materials, testing is recommended to see what polymer type they are identified as.
- **Sleeves/labels** – These can make a difference to the recovery: how much of the surface area is covered by the label and what polymer the label is derived from. Full sleeves generally impede recovery with ink and colours also impacting.

RECOUP add other insight and knowledge as comments to a report produced for the RECOUP member.





RECOUP Packaging Services

At RECOUP we aim to advance understanding around the plastic circular economy, resource efficiency, recycling, and re-use to protect the environment. We can help our members to achieve this by sharing knowledge from our expert team, collaborating with our connections within the industry and using our onsite laboratory services.

Available to our members are a range of informative technical guidance documents, a library of in-depth reports, and a variety of in-house testing services at our on-site laboratory; including tests such as near infrared analysis, fourier transform infrared spectroscopy and wash testing for fibre loss, ink bleeding and adhesive reactions. Informative reports are also provided post-testing to help provide a detailed understanding on the recyclability of the packaging item being tested.



Thanks to our members support, RECOUP can also provide subsidised project rates to encourage new engaging opportunities by offering bespoke project research and reporting tailored to your specific requests. Our high levels of expertise and personalised guidance can help you research end-markets and improve the recyclability of your packaging by assessing pack design, materials, colours, barriers, labelling and NIR detection and where appropriate undertake a life cycle assessment to make more informed, sustainable decisions.



Recyclability Testing - Method

RECOUP will take sample packaging and review it based on typical UK systems, and test through appropriate sorting and reprocessing sites where required. This will be assessed against accepted recyclability criteria. A report will be provided, and test sheets completed to confirm each step of the recycling process. We will document how the samples react within those systems, with the material types and components assessed against recyclability, this will also include details of the equipment provider. If it is not deemed recyclable, the reasons will be given, and recommendations provided to improve recyclability

RECOUP work confidentially for a wide range of producers and brand owners and are happy to sign a specific NDA if required.

The samples will be taken to different facilities to ensure good representation in the UK. Note principles of sorting and reprocessing are also the same internationally. The samples will be tested in real industrial conditions, they will be placed with other mixed material to see how they behave and will be presented to the Near Infra-Red optical sorting equipment to prove detectability. As a matter of course, where NIR tests have been specifically requested, the samples will also be placed at the front of the MRF, to determine progress through the system. i.e. to confirm that the packaging will pass through to the NIR stage, and also to document where the material finishes, after the NIR testing. Within this work, the RECOUP team will help with further development and re-testing as needed.

Guidelines will reflect the definition above, while considering information from waste management companies around the challenges which create issues for them. RECOUP 'Recyclability By Design' guidelines will be updated to reflect the latest information from waste management, while also giving consideration to trial results. Trials of packaging at MRF, PRF and re-processing facilities remain the most effective way of discovering the recyclability of an item of packaging.

Recyclability by Design

RECOUP working with others have produced a suite of Recyclability by Design guidelines to help industry understand the full technicalities of plastic packaging recyclability.



The full technical version of the Recyclability by Design provides details on how to recycle plastic packaging including sustainable alternatives for some of the issues encountered with the various polymers and packaging types. A summary version of Recyclability by Design has also been produced. This work was written by RECOUP and the British Plastics Federation (BPF). WRAP and the Plastics PACT (of which RECOUP are a member) helped create an easy to read version, aimed at a non-technical audience who may not be experts in packaging but need to know about recycling principles.

All versions have been well received and are available to download.

www.recoup.org/resources/reports/

In addition, new sector specific recyclability guidelines are now being produced. This is in response to growing demand by other sectors, as the importance of recyclability is becoming more widely recognised. The first of the specialist guidelines has been written for the Horticultural industry. The Horticultural Trades Association (HTA) supports the guidance and advice within this document and has assisted RECOUP along with growers, and plant pot manufacturers to produce both guidelines and case studies.

Recyclability Guidelines and the Recyclability Assessment Methodology (RAM)

The Recyclability Assessment Methodology (RAM) will evaluate packaging to ensure that it can be recycled and transformed into new products. All packaging that is placed on the UK market and reported as household waste in 2025 will be reviewed using details on the RAM. From 2026, modulated fees will be applied accordingly to each packaging format.



Packaging will be rated as either green, amber or red. Green suggests that the packaging has a recognised path for collection, sorting and recycling and will have lower fees applied than less recyclable materials. Although this sounds similar to existing recyclability guidelines, the RAM does not replace recyclability guidelines. The RAM was written as an instrument to enable fees to be charged for packaging.

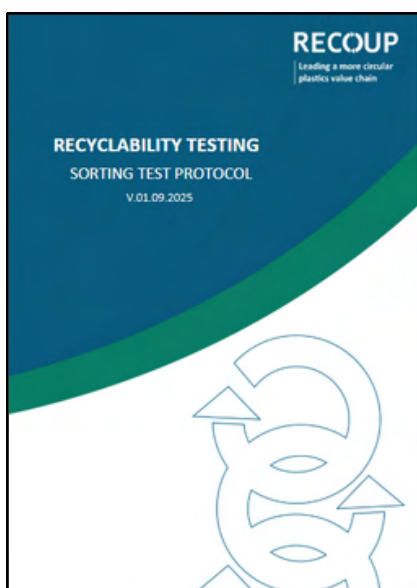
RECOUP Recyclability By Design (RBD) is produced by talking to members; and accepting the advice from recyclers as to what happens now, using widely available technology. This is what makes it different to other instruments which look at what might happen with 'state of the art' equipment in a few years.

The RAM is an important guidance tool, but at this stage it is by no means the complete and definitive guide to recycling.

The RAM is designed to enable brands and packaging producers to grade their packaging to decide what their modulated fees will be. It says so on page 3 of the RAM v1.1, 'this rating affects the disposal fee that will be charged for that packaging.'

The current guidelines in place are still the way brands and producers should be designing packaging. RECOUP's guidelines are designed using feedback and evidence gathered from the recyclers and end markets for the materials and consider all aspects of the recycling process to ensure the highest quality recyclate is produced.

Additional Documents



Other documents are available to view on RECOUP's recyclability testing methods and protocols.

Our Recyclability Testing protocol document entails the sorting test protocols taken following the step-by-step trajectory of packaging entering the facility, observing and documenting the behaviour of the pack through the sorting process to their end point.

1 Metro Centre
Welbeck Way
Woodston
Peterborough
PE2 7UH

T| 01733 390021
E| enquiry@recoup.org
W| www.recoup.org



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VAT Registration Number: 546 5837 10
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