

morro

Recyclability Report

Morro™ Coating



Tested by



Recyclability Score for Morro™ Coating:

87/100

275 gsm kraft board coated with 6 gsm of Morro™ Coating was sent to DS Smith for testing. Following testing, this sample was awarded 87/100, confirming that paper with Morro Coating is suitable for recycling at standard mills.

The overall score for recyclability is based on a variety of factors and properties on performance throughout the testing.

What is the Recyclability Evaluation Protocol?

The recyclability evaluation protocol helps to assess the recyclability of packaging and materials in standard recycling materials.

Performed by DS Smith, in partnership with 4evergreen, this test is based on expert opinion and consensus-building to create the most up-to-date scoring for the recyclability of fibre-based packaging.

The 4EG Recyclability Evaluation Protocol test method is designed to understand how a product would behave in a **Standard Recycling Mill**.

Yield Evaluation:

Best In Class

The yield score assesses the amount of fibrous material that can be retrieved from the fibre-based packaging.

The paper with Morro™ Coating repulped well with minimal fibre bundles present. Our yield score is 92/100, the highest scoring bracket for the evaluation protocol. This means that Morro Coating does not pose any repulpability issues in standard mills with a **'best in class'** evaluation.

Visual Impurities:

Level 2

The paper with Morro Coating was awarded a Level 2 for visual impurities. This means that the minor visual impurities are acceptable for standard mill recycling without compromising the acceptability of the optical quality of the pulp.

Sheet Adhesion:

Level 1

The sheet adhesion score assesses the potential to form tacky impurities that are detrimental to the paper production process. Paper with Morro Coating was awarded Level 1, the highest level, indicating no adhesion issues. This included both coarse accepts and fine accepts.

Understanding The Recycling Evaluation Protocol Method

DS Smith has partnered with 4evergreen as part of their sustainability journey. 4evergreen issues factual guidelines and technical documents across the fibre-based packaging value chain in order to support the design of packaging focused on achieving the best 'circularity performance', including the recycling evaluation protocol method.

The recyclability evaluation protocol is mapped across three core properties: yield, visual impurities, and sheet adhesion. The yield is calculated from both the Coarse Reject percentage and Fine Reject percentage.

The evaluation methodology includes sample preparation, disintegration, filtrate analysis, determination of evaporation residue, determination of Coarse Reject (resulting in Coarse Accept sheet formation), determination of Fine Reject (resulting in Fine Accept sheet formation), and then all results are evaluated. The protocol is devised to replicate standard mill recycling with additional evaluation. Standard mills typically utilise paper for recycling belonging to the EN 643 grades 1-4. The standard fibre-based packaging recycling process includes repulping, coarse and fine screening, cleaning, and papermaking.

Morro™ Coating

Best In Class

Morro™ Coating offers exceptional performance as a drop-in solution for plastic-free and PFAS-free replacement for traditional barrier coating.

It is compliant with EU SUP Directive and is compatible with existing industrial scale coating methods.

Interested in Morro Coating for your business?
Please get in touch with us by emailing
hello@xampla.com



Introducing Xampla

Creator of Morro™ materials

Xampla is a materials technology company, unlocking the power of plants to create natural materials to change the world.

Morro™ materials are world-first, plastic-free materials made from natural plant polymers, without any chemical modification. They are fully biodegradable with excellent functional properties for a variety of applications to eliminate the world's most polluting plastics.



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