BYK-MAX NU 4233

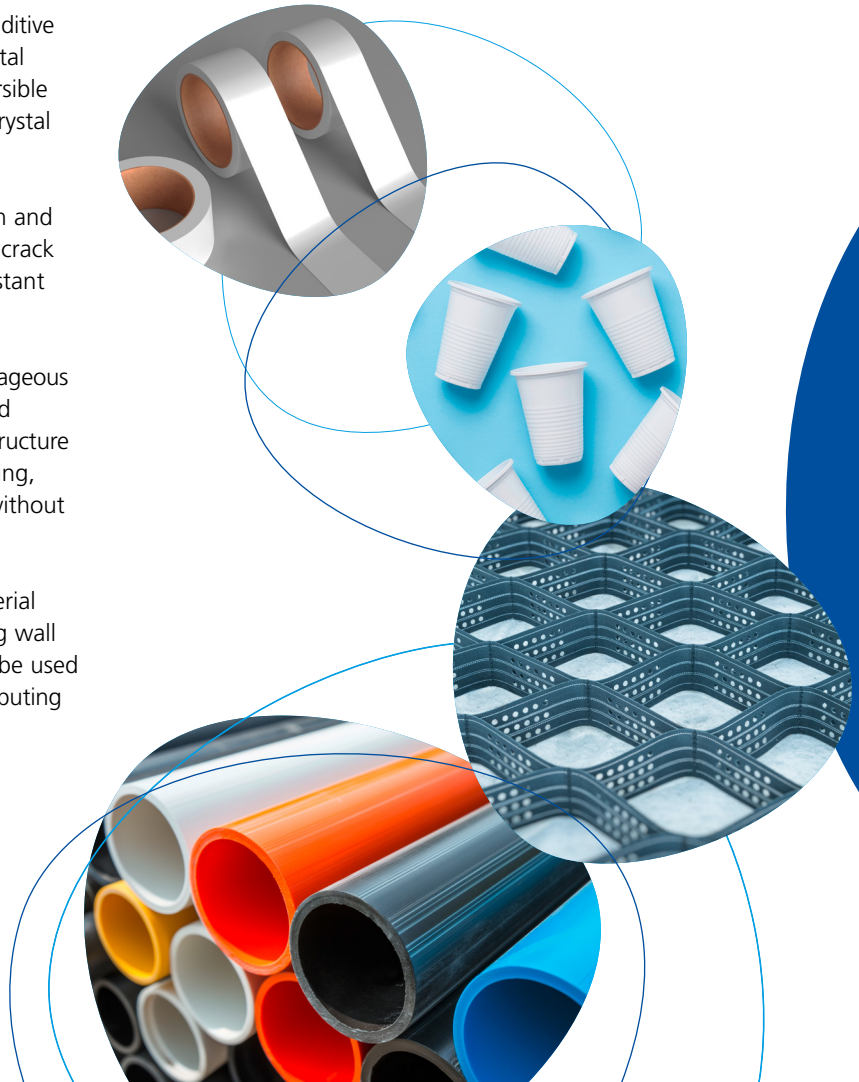
Nucleation aid composition for use in polypropylene to promote ß-crystal formation and enhance impact strength, elongation at break and visual opacity in injection molding, extrusion and thermoforming applications.

BYK-MAX NU 4233 is an effective, thermally stable additive concentrate that controls the formation of the ß-crystal structure in polypropylene. It is based on finely dispersible crystalline particles that can produce a controlled ß-crystal content of 90 % or higher.

ß-crystallisation significantly increases impact strength and tensile elongation, as well as improving resistance to crack propagation, even at low temperatures. It is also resistant to impact stress.

These properties make the additive particularly advantageous for applications where mechanical strength is required alongside a high deformation capacity. The lamellar structure of the ß-crystallites also produce intense light scattering, giving the material a uniform, opaque appearance, without the addition of white pigments.

In packaging or visible applications, this enables material savings to be made. This can be achieved by reducing wall thickness while maintaining the same opacity. It can be used with both virgin and recycled materials, thereby contributing to property optimization in recycling applications.



Key benefits

- Improvement in impact strength and elongation at break
- Concentrated formulation – suitable for single-screw processing
- Compatible with PP recyclates

Areas of application

- Injection and compression molding parts
- Extrusion and blow molding parts
- Thermoformed parts
- Thick films and sheets

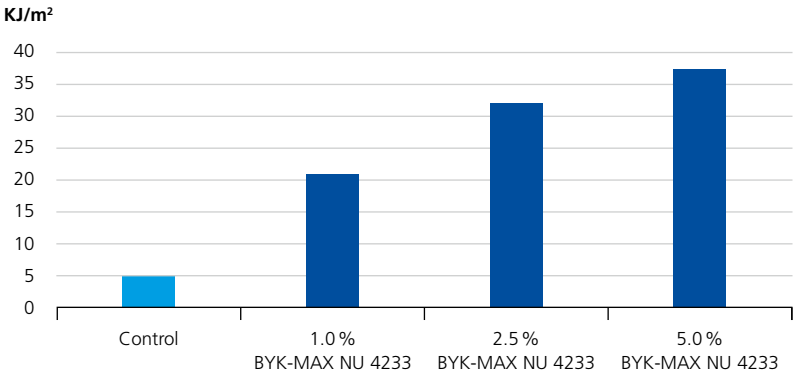
BYK-MAX NU 4233
Product benefits supporting sustainability

Resource efficiency
ß-nucleation increases opacity, enabling thinner parts and reducing raw material use.

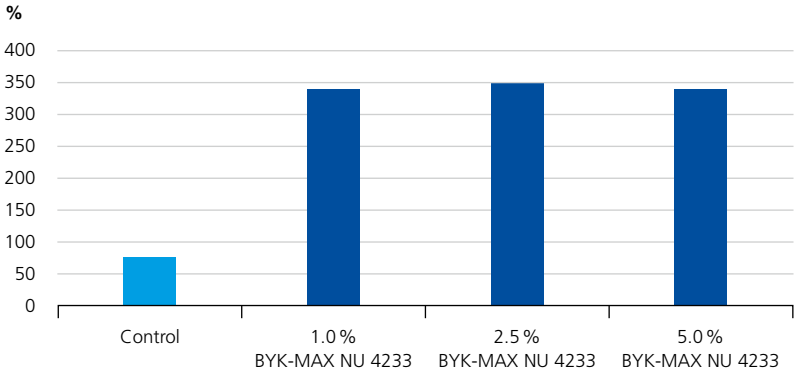
Design for recycling
White appearance without TiO_2 minimizes pigment contamination, improving recyclability.

Recycle enhancement
Improves the quality of recycled PP for use in higher-value applications.

Charpy notched impact strength



Elongation at break



Test system: Moplen HP556E (polypropylene homopolymer)

Additive dosage: % additive as supplied on total formulation; control w/o additive

BYK-MAX NU 4233 shows a significant improvement in impact strength and elongation at break

Your local contact

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