



IKEA of Sweden AB

# Specification

## Recycled polypropylene: injection moulding grades

Spec. no: IOS-MAT-0105

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Replaces:

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# Recycled Polypropylene: injection moulding grades

## Contents

This specification describes IKEA requirements for recycled polypropylene (RPP) and the IKEA RPP standard grades.

## About this specification

This specification aims to clearly describe the IKEA injection moulding grades based on post industrial recycled polypropylene.

## IKEA RPP standard grades

Approved trade name grades are available from IKEA. Before a new trade name grade may be used, it shall be approved by IKEA.

PP	Tensile			Impact		Flow	Heat resistance
	Stiffness (MPa) ISO 527-2 1 mm/min	Stress at yield (MPa) ISO 527-2 50 mm/min	Strain at yield (%) ISO 527-2	Charpy notched (kJ/m <sup>2</sup> ) ISO 179-1/1eA -20 °C    +23 °C		MFR (g/10 min) ISO 1133 230 °C, 2.16 kg	HDT B (°C) ISO 75/B --
Table 1. RPP "stiffness"							
RPP i2	≥1250	≥24	≥6	NA	≥1.9	≥20	≥70
Table 2. RPP "impact"							
RPP i4	≥950	≥20	≥4	≥2	≥4	≥10	≥70
RPP i6	≥950	≥22	≥4.5	≥3	≥6.5	≥10	≥70

Tolerance requirement on density (ISO 1183), for mineral filled grades:

+/- 1% for <20% mineral filled or unfilled

+/- 1.5% for ≥20% mineral filled



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## References

If nothing else is stated, latest edition applies.

Table 3. References related to specification	
Related standard	Name
<b>ISO 75-B</b>	Plastics – Determination of temperature of deflection under load – Part 2: Plastics and ebonite
<b>ISO 179-1/1eA</b>	Plastics – Determination of Charpy impact properties – (Type 1, Edgewise, Notch A)
<b>ISO 527-2</b>	Plastics – Determination of tensile properties – Part 2: Test conditions for moulding and extrusion plastics
<b>ISO 1133</b>	Plastics – Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics
<b>ISO 1183</b>	Plastics - Methods for determining the density of non-cellular plastics - Part 1, method A.

## Definitons

Term	Description
<b>Post industrial recycled material</b>	Industrial scrap/waste material that have never been on the field or used for their purpose by customers. The industrial scrap/waste material is normally upgraded through compounding to a ready to use material by injection moulding to a product.