

Great question! Raffia extrusion is one of the most traditional and large-scale applications of polypropylene (PP), especially in woven sacks, ropes, and agricultural fabrics. Producers like Braskem offer **several homopolymer PP grades** for raffia because the process and end-use products demand different balances of **processability, mechanical strength, and cost efficiency**. Here's why:

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## Why Multiple Homopolymer PP Grades Exist in Raffia Extrusion

### 1. Processing Requirements

- **Melt Flow Index (MFI):**
    - **Low MFI grades** → higher viscosity, better melt strength, ideal for stable film extrusion and stretching into tapes.
    - **High MFI grades** → easier flow, faster throughput, suited for high-speed lines and finer tapes.
  - Raffia extrusion involves **film extrusion + slit + stretching into tapes**, so different grades ensure stability across line speeds and tape dimensions.
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### 2. Mechanical Property Needs

- Homopolymer PP provides **high stiffness and tensile strength**, which are critical for woven sacks and ropes.
  - Multiple grades allow fine-tuning of:
    - **Tensile modulus** (for strong tapes).
    - **Elongation and shrinkage behavior** (important during stretching).
    - **Durability under load** (for heavy-duty sacks and ropes).
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### 3. Application Diversity

- **Woven sacks for cement, grains, sugar:** Need high strength and dimensional stability → low MFI homopolymer grades.
- **Agricultural fabrics (shade nets, ground covers):** Require balance of stiffness and flexibility → mid-range grades.
- **Ropes and twines:** Need toughness and abrasion resistance → specialized homopolymer grades with optimized crystallinity.
- **Lightweight packaging tapes:** Require high productivity and thinner tapes → high MFI grades.

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#### 4. Additive & Performance Packages

- Different grades incorporate **UV stabilizers** (for outdoor agricultural use), **antioxidants** (for long-term durability), or **pigment dispersion optimization** (for colored raffia products).
- Some grades are tailored for **recycling compatibility**, important in woven sack production.



#### Summary

- **Homopolymer PP grades** are chosen for **strength, stiffness, and processability** in raffia extrusion.
- Multiple grades exist because raffia applications range from **heavy-duty woven sacks** to **lightweight packaging tapes**, each requiring a different balance of **melt flow, tensile properties, and stabilization**.
- By offering several grades, producers ensure that customers can match the PP resin to their **specific raffia process and end-use performance needs**.

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👉 I can also prepare a **comparison chart of Braskem's raffia extrusion PP grades** (melt flow, tensile strength, UV stability, typical applications) so you can see how each one is positioned in the portfolio. Would you like me to build that chart?