

# SABIC POLYAMIDE 6 (SABIC® PA6) FOR EXTRUSION & COMPOUNDS

## INTRODUCTION

Polyamide 6 is a polycaprolactum produced by ring opening polymerization of caprolactum

The amide groups in semi-crystalline Polyamide 6 may offer:

- Superior mechanical properties
- Excellent barrier properties
- Good chemical resistance

They may also form strong interactions with humidity, causing Polyamide 6 to absorb moisture



## SABIC® PA6 VALUE PROPOSITION

- SABIC offers natural/unfilled Polyamide 6 grades (SABIC® PA6) in low & medium viscosity range
- Grades are additive-free & do not contain any performance additive
- Polyamide 6 is pre-dried and supplied in moisture-proof packaging to ensure moisture content within specifications

## POLYAMIDE 6 vs. POLYAMIDE 66

Parameter	PA6	PA66
Monomers	Caprolactum	Hexa methylene diamine & Adipic acid
Melting point, °C	220	262
HDT @1.8MPa, °C	50	60
Tg, °C	35-51	51-62
Processing window	Wider	Relatively narrow
Conditioning time	Much lower	Relatively higher
Weathering resistance	Better	Relatively poor
Impact strength	Higher	Lower
Stiffness & wear resistance	Lower	Higher
Temperature resistance	Relatively lower	Higher
Water absorption	Higher	Lower

PROCESSING TECHNIQUES			TYPICAL PROCESSING GUIDELINES
<ul style="list-style-type: none"> <li>Blown Film</li> <li>Cast Film (non-Oriented)</li> <li>Monofilaments</li> </ul>			<ul style="list-style-type: none"> <li>Die gap : 0.5 to 1.5 mm for monolayer &amp; 2 to 2.5 mm for MLF</li> <li>Temp Profile: 200 to 250°C , BUR: 1:3</li> <li>T or Coat hanger die with die gap 1 to 1.2 mm</li> <li>Temp Profile: 200 to 265°C , Chill roll : 20 to 40°C for Thermoforming</li> <li>Temp Profile: 200 to 250°C , Spinneret nozzle diameter &lt; 1 mm</li> <li>Quench bath: 5 to 10°C, Final Draw Ratio: 4.5 to 5.5 @ 200°C</li> </ul>
GRADE	RV	WATER CONTENT %	APPLICATIONS
S27	2.7	≤0.06	Compounding, paper coating, fine gauge monofilaments, velcro tapes & artificial grass
S32	3.2	≤0.06	Barrier film, high tenacity filament for fishing nets/ tire cord, compounding, paper coating

## CONTACT:

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