

## TECHNICAL DATA SHEET

# PEBAX® RNEW® 80R53 SP 02

## POLYETHER BLOCK AMIDE PELLETT

PEBAX® RNEW® 80R53 SP 01 is a polyether block amide, a thermoplastic elastomer made of flexible polyether and rigid polyamide. It is partially produced from a renewable & sustainable source (castor oil). This natural SP grade is heat & UV stabilized. It is used in sport and consumer applications.

### DESIGNATION

PEBA

### MAIN APPLICATIONS

- Footwear - Outsole/Components
- Others
- Hoses & Tubes

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

- Extrusion - General
- Film Extrusion
- Injection Molding
- Tube Extrusion

### ADDITIVES

- Heat Stabilized
- Light Stabilized

## RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Shrinkage, Parallel (t+24h)	1.2 %	ISO 294-4
Shrinkage, Normal (t+24h)	1.3 %	ISO 294-4

## MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Hardness, Shore D, 15 s	- / 67	ISO 868
Charpy unnotched impact strength, 23°C (73°F)	- / No Break	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / No Break	ISO 179 1eU
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 300 %	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 24 %	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 33 MPa	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 840 MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	- / 944 MPa	ISO 527-1/-2
Charpy notched impact strength, 23°C (73°F)	- / 44 kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 16 kJ/m2	ISO 179 1eA
Stress at break, 23°C (73°F), 50 mm/min	- / 52 MPa	ISO 527-1/-2

\*DRY: Dry As Molded (DAM) if pellet / Dry if powder.  
COND: Conditionned.

# PEBAX® RNEW® 80R53 SP 02

## THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melting temperature, 10°C/min	188 °C	ISO 11357-1/-3

## OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Bio-based carbon content, Measured	92 %	ASTM D6866
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.8 %	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	0.7 %	ISO 62
Specific gravity, 23°C (73°F)	1.02 g/cm <sup>3</sup>	ISO 1183-1

## PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. Available packaging:

- 25 kg / 55 lb bags

## SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

## PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 230°C / 260°C / 290°C (445°F / 500°F / 555°F)
- Typical mold temperature - Injection molding: 20-60°C (70-140°F)
- Drying time and temperature: 70-80°C (160-175°F) / 4-6 hours

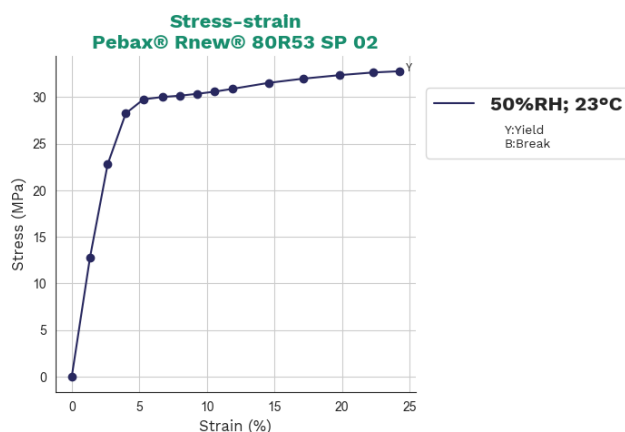
## SPECIAL CHARACTERISTICS

- Bio-based

## REGIONAL AVAILABILITY

Asia Pacific, Europe, Latin America and the Caribbean, Middle East, Northern America

## DIAGRAMS



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