

## TECHNICAL DATA SHEET

04.03.2025

Version 3.4

### SULAPAC SOFT – EX1023.0NC

Sulapac Soft is a sustainable solution for extrusion and injection molding. With its outstanding functional properties, including elongation and elastic recovery, Sulapac Soft works perfectly as the liner material for cosmetic jars, among other applications.

TYPICAL MATERIAL PROPERTIES	
	EX1023.0NC
<b>PHYSICAL PROPERTIES</b>	
Hardness (Shore D)	48
Material density (g/cm <sup>3</sup> )	1,17
<b>TENSILE PROPERTIES (ISO 527-1)</b>	
Tensile strength at yield (MPa)	10
Tensile modulus (GPa)	0,32
Tensile strain at break (%)	> 230
<b>FLEXURAL PROPERTIES (ISO 178)</b>	
Flexural strength at max load (MPa)	10
Flexural modulus (GPa)	0,32
Flexural strain at max load (%)	> 6
<b>IMPACT PROPERTIES (ISO 179-1)</b>	
Charpy impact strength – Unnotched (kJ/m <sup>2</sup> )	NB
Charpy impact strength – Notched (kJ/m <sup>2</sup> )	53
<b>RHEOLOGICAL PROPERTIES (ISO 1133) (190°C/2,16 kg)</b>	
MFI (g/10min)	7
<b>BIOBASED CONTENT (ASTM D6866)</b>	
Biobased content (%)	55

## DRYING AND MASTERBATCH INSTRUCTIONS

### DRYING

- Before processing, the granules should be dried using a dehumidifying dryer or a vacuum dryer
  - Dehumidifying dryer: the granules should be dried for at least 5-6 hours at 80 °C
  - Vacuum dryer: the granules should be first dried for at least 20 minutes at 80 °C
- The best end result will be achieved if the residual moisture of the granules is < 0,2 %
- After drying, avoid exposing the material to ambient conditions
- Moisture content can lead to hydrolysis

### MASTERBATCH

- Sulapac materials can be colored in the same way as conventional plastics. With Sulapac materials use color masterbatches with biodegradable carriers; PLA, PHA, PBAT, PBS. For further information, please see Sulapac color masterbatch guide.
- If color masterbatch is added, the granules should be cooled down to 50 °C in order to avoid the agglomeration of color masterbatch granules

## EXTRUSION - PROCESSING CONDITIONS

### GENERAL INSTRUCTIONS

- Typical settings may require optimization
- Avoid using temperatures above 180°C in order to lower the risk of polymer degradation
- The dwell time of the material shall be reduced to a minimum in order to lower the risk of thermal degradation
- Decreasing temperature profile is recommended

### RECOMMENDED TEMPERATURES

Throat	80 °C
Feed zone	120 – 160 °C
Compression zone	130 – 180 °C
Homogenizing zone	130 – 180 °C
Melt cooler	115 – 140 °C
Die	115 – 140 °C
Melt temperature	130 – 160 °C

## INJECTION MOLDING - PROCESSING CONDITIONS

### GENERAL INSTRUCTIONS

- Typical settings may require optimization
- Both cold and hot runner systems are suitable for these materials
- Valve gate systems can be used
- Avoid using temperatures above 180 °C in order to lower the risk of polymer degradation
- The dwell time of the material shall be reduced to minimum in order to lower the risk of thermal degradation

### RECOMMENDED TEMPERATURES

Throat	40 – 60 °C
Feed zone	120 – 140 °C
Compression zone	130 – 150 °C
Homogenizing zone	130 – 150 °C
Machine nozzle	130 – 150 °C
Back pressure	5 – 10 bar
Hot runner nozzle and bushing	130 – 150 °C
Tooling temperature	20 °C

## PURGING INSTRUCTIONS

### BEFORE PRODUCTION

- Purge the extruder or plasticization unit and hot runner with PP or PE

### DURING PRODUCTION

- The material is heat sensitive. Avoid high processing temperatures and long dwell times
- If an extensive amount of burned material or fumes starts to appear in the products, try lowering processing temperature
- In case of production break flush the extruder or plasticization unit with fresh material

### AFTER PRODUCTION

- Purge the extruder or plasticization unit and hot runner with PP or PE
- Clean up the die or mold after production

## STORAGE, TRANSPORTATION AND SHELF-LIFE

### STORAGE

- In original unopened packaging at temperatures below 45 °C
- Once opened, reseal the package after each use
- In dry conditions and avoid exposure to high humidity and rain
- Away from direct sunlight

### TRANSPORTATION

- Temperatures during transportation may not exceed 60 °C

### SHELF-LIFE

- Shelf-life is from the date of manufacture, for unopened bags at room temperature (23 °C)
- Date of manufacture can be found on the label attached to the original packaging

**Sulapac Soft – EX1023.0NC**

12 months

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Sulapac is proud to be an ISO 9001 and ISO 14001 certified company.