SULAPAC

TECHNICAL DATA SHEET

09.12.2025
Version 3.0

SULAPAC UNIVERSAL – IM1002.0NC

Sulapac's Universal material is a sustainable solution for injection molding. Sulapac Universal is for rigid items with visible wood flakes. The material is not intended for long term water contact.

TYPICAL MATERIAL PROPERTIES	
	IM1002.0NC
PHYSICAL PROPERTIES	
Hardness (Shore D)	80
Material density (g/cm^3)	1,27
Shrinkage (%)	0,2
TENSILE PROPERTIES (ISO 527-1)	
Tensile strength at yield (MPa)	45
Tensile modulus (GPa)	4,5
Tensile strain at yield (%)	1,6
FLEXURAL PROPERTIES (ISO 178)	
Flexural strength at max load (MPa)	74
Flexural modulus (GPa)	5,1
Flexural strain at max load (%)	1,9
IMPACT PROPERTIES (Unnotched, ISO 179-1)	
Charpy impact strength (kJ/m^2)	10
RHEOLOGICAL PROPERTIES (ISO 1133) (190°C/2,16 kg)	
MFI (g/10min)	12
HEAT RESISTANCE	
HDT-B (°C)	56
BIOBASED CONTENT (ASTM D6866)	
Biobased content (%)	100
MATERIAL COLOR	
Due to the natural origin of wood, color variation is possible both between and within material batches.	

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DRYING INSTRUCTIONS

- 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 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
- If color masterbatch is added, the granules should be cooled down to 50°C in order to avoid the agglomeration of color masterbatch granules

USE OF 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.

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 200°C in order to lower the risk of wood and 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	150 – 170 °C
Compression zone	160 – 180 °C
Homogenizing zone	175 – 190 °C
Machine nozzle	175 – 190 °C
Back pressure	5 – 10 bar
Hot runner nozzle and bushing	175 – 190 °C
Tooling temperature	20 – 40 °C

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PURGING INSTRUCTIONS

BEFORE PRODUCTION

- Purge the plasticization unit and the 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 plasticization unit with fresh material

AFTER PRODUCTION

- Purge the plasticization unit and the hot runner with PP or PE
- Clean up the 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 Universal – IM1002.0NC	24 months

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