



# MOLD SELECTION GUIDE - TRIAL RUN

## SULAPAC UNIVERSAL INJECTION MOLDING

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Sulapac Universal Injection Molding material can be tested with a wide range of common injection molds. For the best results from the test, certain material properties should be considered when choosing the test mold / part.

- High material stiffness (4-6Gpa, ISO 527-1)
- Low tensile strain % (~1.5%, ISO 527-1)
- Low material shrinkage (~0.2-0.3%)
- MFI value (15-19 g/10mm, ISO 1133)

See Technical Data Sheet of Sulapac Universal Injection Molding for more mechanical properties.

### MOLD MATERIALS

Sulapac Universal Injection Molding material can be tested with molds constructed of common tool steels. It is not recommended to use molds with coating on the cavity/core surfaces. In case of long production runs or when specifying tool steels or components for new molds, please contact Sulapac for recommendations.

### GATING

RECOMMENDED GATE TYPES	
HOT RUNNER	COLD RUNNER
<ul style="list-style-type: none"> <li>- Hot tip</li> <li>- Valve gate</li> </ul>	<ul style="list-style-type: none"> <li>- Edge gate</li> <li>- Direct gate / sprue gate</li> <li>- Pin point gate</li> </ul>

Due to stiffness and low material shrinkage % of Universal material, it is recommended to check that cold runner surfaces are well polished and have adequate draft angles to ensure that runner/sprue can be ejected properly.

Not recommended gate types:

- A cashew / banana gate. In general, gate types which require flexibility from the molded material.
- A tunnel / submarine gate design must be evaluated against the mechanical properties of the Universal grade to ensure successful degating and runner ejection.

## GATE DIMENSION

Minimum gate size for Universal grade is Ø1.0mm.

## TEST PART DESIGN

- Test part should not have walls or sections thinner than 0.7mm.
- Undercut shapes are not recommended unless formed by lifters/sliders.
- Demolding / draft angle recommendations:
  - Draft angle for external surfaces > 0.5°
  - Textured surfaces require more draft, e.g., VDI3400 ref 21 requires min 1.5° draft angle.
  - Draft angle for internal surfaces > 1°.