

## PROCESS DATA SHEET

# EOS NickelAlloy 247 | General data

-- TRL 3

## Process Information Metal

The mechanical properties of EOS NickelAlloy 247 may vary depending on the specific processing parameters and heat treatment used for the component manufacturing. The following data represents tensile properties typically achievable from EOS NickelAlloy 247.

### Microstructure of the Produced Parts

## Mechanical Properties

### Mechanical Properties HIP + Heat-treated

EN ISO 6892-1 Room Temperature	Yield Strength [MPa]	Tensile Strength [MPa]	Elongation at Break A [%]	Reduction of Area Z [%]	Modulus of elasticity [GPa]	Number of Samples
Vertical	920	1200	12	14	-	-
Horizontal	940	1250	7	9	-	-

## Mechanical Properties Heat Treated

EN ISO 6892-1 870°C	Yield Strength [MPa]	Tensile Strength [MPa]	Elongation at Break A [%]	Reduction of Area Z [%]	Modulus of elasticity [GPa]	Number of Samples
Vertical	700	900	10	10	-	-
Horizontal	750	920	2	4	-	-

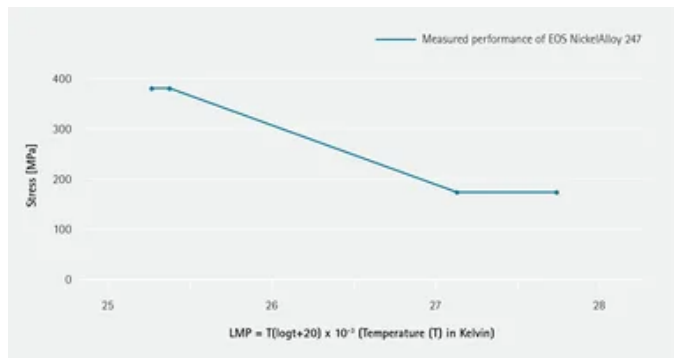
## Stress Rupture Performance

ASTM E139	Stress [MPa]	Temperature [°C]	Time to Rupture [hrs]	Elongation [%]	RA [%]
Vertical	380	870	158	14	14.5
Horizontal	380	870	17	0.85	4.1

The creep resistance of EOS NickelAlloy 247 may vary depending on the specific processing parameters and heat treatment used for the component manufacturing. The following data represents stress rupture test results typically achievable from EOS NickelAlloy 247.

## Stress rupture performance

ASTM E139, L <sub>0</sub> = 4.d <sub>0</sub>	Stress [MPa]	Temperature [°C]	Time to rupture [hrs]	LMP	EF%	RA%
Horizontal	380	870	158	25.37	14	14.5
Vertical	380	870	17	25.26	0.85	4.1
Horizontal	172	982	125	27.73	17.5	22
Vertical	172	982	42	27.12	1.8	2.9



The creep resistance of EOS NickelAlloy 247 may vary depending on the specific processing parameters and heat treatment used for the component manufacturing. The shown data represents stress rupture test results typically achievable from EOS NickelAlloy 247.

## HEADQUARTERS

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