

## Outokumpu 254 SMO® High Performance Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Pressure Vessel Steel , Stainless Steel

### Material Notes:

Applications: Process equipment in chemical industry Bleaching equipment in the pulp and paper industry Flue-gas cleaning Desalination Seawater handling Heat exchangers Available in hot rolled plate (Quarto), hot rolled strip/sheet (CPP), cold rolled strip/sheet, cold rolled narrow strip, bar, and rod forms.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Outokumpu-254-SMO-High-Performance-Austenitic-Stainless-Steel.php](http://www.lookpolymers.com/polymer_Outokumpu-254-SMO-High-Performance-Austenitic-Stainless-Steel.php)

Physical Properties	Metric	English	Comments
Density	8.00 g/cc	0.289 lb/in <sup>3</sup>	RT

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	>= 210	>= 210	Hot rolled plate/Hot rolled strip/Cold rolled strip; EN 10003-1
Tensile Strength, Ultimate	680 MPa	98600 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	510 MPa	74000 psi	EN min.; EN 10002-5
	@Temperature 400 °C	@Temperature 752 °F	
	525 MPa	76100 psi	EN min.; EN 10002-5
	@Temperature 300 °C	@Temperature 572 °F	
Tensile Strength, Yield	560 MPa	81200 psi	EN min.; EN 10002-5
	@Temperature 200 °C	@Temperature 392 °F	
	615 MPa	89200 psi	EN min.; EN 10002-5
Tensile Strength, Yield	@Temperature 100 °C	@Temperature 212 °F	
	300 MPa	43500 psi	EN min.,RT; EN 10002-1
	@Strain 0.200 %	@Strain 0.200 %	
	340 MPa	49300 psi	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
	@Strain 0.200 %	@Strain 0.200 %	
Tensile Strength, Yield	380 MPa	55100 psi	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
	@Strain 1.00 %	@Strain 1.00 %	
	160 MPa	23200 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 400 °C	@Strain 0.200 %, Temperature 752 °F	
	170 MPa	24700 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.200 %, Temperature 300 °C	@Strain 0.200 %, Temperature 572 °F	EN 10002-5
	190 MPa	27600 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 200 °C	@Strain 0.200 %, Temperature 392 °F	
	190 MPa	27600 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 400 °C	@Strain 1.00 %, Temperature 752 °F	
	200 MPa	29000 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 300 °C	@Strain 1.00 %, Temperature 572 °F	
	225 MPa	32600 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 200 °C	@Strain 1.00 %, Temperature 392 °F	
	230 MPa	33400 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	270 MPa	39200 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 100 °C	@Strain 1.00 %, Temperature 212 °F	
Elongation at Break	50 %	50 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
Modulus of Elasticity	195 GPa	28300 ksi	RT
	166 GPa	24100 ksi	
	@Temperature 400 °C	@Temperature 752 °F	
Poissons Ratio	0.30	0.30	RT
Shear Modulus	75.0 GPa	10900 ksi	calculated
Impact Test	>= 60.0 J	>= 44.3 ft-lb	Hot rolled plate/Hot rolled strip/Cold rolled strip; EN 10045-1

Thermal Properties	Metric	English	Comments
CTE, linear	16.5 µm/m-°C	9.17 µin/in-°F	
	@Temperature 100 °C	@Temperature 212 °F	
	18.0 µm/m-°C	10.0 µin/in-°F	
	@Temperature 400 °C	@Temperature 752 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	RT

Thermal Properties	Metric	English	Comments
Thermal Conductivity	18.0 W/m-K	125 BTU-in/hr-ft <sup>2</sup> -°F	RT
	@Temperature 400 °C	@Temperature 752 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 %	0.010 %	
Chromium, Cr	20 %	20 %	
Iron, Fe	55.69 %	55.69 %	
Molybdenum, Mo	6.1 %	6.1 %	
Nickel, Ni	18 %	18 %	
Nitrogen, N	0.20 %	0.20 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000850 ohm-cm	0.0000850 ohm-cm	RT

Processing Properties	Metric	English	Comments
Annealing Temperature	1120 - 1150 °C	2050 - 2100 °F	Solution Annealing, cooling with air/water
	@Thickness <=2.00 mm	@Thickness <=0.0787 in	
	1150 - 1200 °C	2100 - 2190 °F	Solution Annealing, quench with water
	@Thickness >=2.00 mm	@Thickness >=0.0787 in	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China