Outokumpu 4742 High Temperature Ferritic Stainless Steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel

Material Notes:

Good scaling resistance and can be subjected to reducing sulphur environments without risk. Subject to 475°C embrittlement and grain coarsening at temperatures above 950°C. s-phase may form after long time exposures to temperatures around 650°C.Applications: Mostly used in high temperature applications with sulphurous atmospheres and/or low tensile loads such as for installations within: Chemical industry (drums)Power industry (coal burners)Metalworking industry (heat treatment boxes)Furnace technology (walls, doors)Available in hot rolled plate (Quarto) form.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Outokumpu-4742-High-Temperature-Ferritic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.60 g/cc	0.275 lb/in³	RT

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	212	212	RT; EN 10003-1
Tensile Strength, Ultimate	535 MPa	77600 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
Tensile Strength, Yield	375 MPa @Strain 0.200 %	54400 psi @Strain 0.200 %	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
	405 MPa @Strain 1.00 %	58700 psi @Strain 1.00 %	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
Elongation at Break	25 %	25 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1

Thermal Properties	Metric	English	Comments
CTE, linear	12.1 µm/m-°C @Temperature 600 °C	6.72 µin/in-°F @Temperature 1110 °F	
	12.9 µm/m-°C @Temperature 800 °C	7.17 µin/in-°F @Temperature 1470 °F	
Specific Heat Capacity	0.450 J/g-°C	0.108 BTU/lb-°F	RT
Thermal Conductivity	16.0 W/m-K	111 BTU-in/hr-ft²-°F	RT
	22.3 W/m-K @Temperature 500 °C	155 BTU-in/hr-ft²-°F @Temperature 932 °F	
Maximum Service Temperature, Air	1000 °C	1830 °F	Dry Air

Thermal Properties	Metric	English	Comments

Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.70 %	0.70 %	
Carbon, C	0.12 %	0.12 %	
Chromium, Cr	18 %	18 %	
Iron, Fe	81.18 %	81.18 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000910 ohm-cm	0.0000910 ohm-cm	

Processing Properties	Metric	English	Comments
Annealing Temperature	800 - 850 °C	1470 - 1560 °F	Cooling: forced air or water

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