MATERION

DATA SHEET

*e*Stainless® Clad

eStainless steel is a thermally conductive, fully formable clad laminate of stainless steel and copper (SUS/Cu/SUS). It is ideal as a high-conductivity replacement for stainless steel, allowing heat spreading functionality to be designed directly into the structure of devices. Integrated heatsinks made of eStainless clads reduce the need to add specialty thermal management solutions, saving both costs and internal device space. eStainless steels are typically used in consumer electronics devices to enhance the performance of components such as chassis, frames, EMI shields, brackets, and anywhere else that metals are used.

PHYSICAL PROPERTIES

Grade	Electrical Conductivity	X-Y Thermal Conductivity	Z Thermal Conductivity	Bending Modulus
eStainless 300	73% IACS	290 W/m°K	57 W/m°K	162 GPa
eStainless 240	60% IACS	240 W/m°K	38 W/m°K	179 GPa
eStainless 200	50% IACS	200 W/m°K	31 W/m°K	190 GPa

MECHANICAL PROPERTIES[1]

Grade	Temper	SUS Hardness	Bending Yield Strength	0.2% Offset Yield Strength	Ultimate Tensile Strength	Elongation	90° Bend Formability (Longitudinal)
eStainless 300 15/70/15[2]	H0	180-240 HV	292-462 MPa	135 MPa	290 MPa	17%	<0.5
	H1	240-300 HV	462-632 MPa	-	-	-	-
	H2	290-350 HV	604-774 MPa	370 MPa	400 MPa	6%	<1.0
	H3	320 HV min.	689 MPa min.	400 MPa	430 MPa	2%	-
eStainless 240 20/60/20[2]	H0	180-240 HV	322-511 MPa	200 MPa	400 MPa	22%	<0.5
	H1	240-300 HV	511-699 MPa	-	-	-	-
	H2	290-350 HV	667-856 MPa	433 MPa	490 MPa	8%	<1.0
	H3	320 HV min.	761 MPa min.	-	-	-	<2.0
eStainless 200 25/50/25[2]	H0	180-240 HV	342-542 MPa	260 MPa	461 MPa	25%	<0.5
	H1	240-300 HV	542-742 MPa	350 MPa	510 MPa	22%	<0.5
	H2	290-350 HV	708-908 MPa	510 MPa	590 MPa	11%	<1.0
	H3	320 HV min.	808 MPa min.	560 MPa	620 MPa	4%	<1.25

[1]All values are nominal

[2]Clad layer thicknesses %SUS/%Cu/%SUS

MATERION PERFORMANCE ALLOYS AND COMPOSITES
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