

Ferritic Stainless Steel

405, 409, 430



DATUMALLOYS

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NOMINAL CHEMICAL COMPOSITION:

Alloy No.	Cr	C	Mn	Ni	Al	N	Other
405	12.50	0.08	1 Max	.60 Max	0.20		
409	11.00	0.08	1 Max	.50 Max		Ti6xC Min	.75 Ti
430	16.00	0.12	1 Max	.75 Max			

APPLICABLE SPECIFICATIONS:

Alloy No.	USA	
	ASTM	AMS Spec. No.
405	A176	
409	A176	
430	A176	5503

MECHANICAL PROPERTIES:

Alloy No.	Temper	Tensile Strength Nmm ⁻²	Yield Strength Nmm ⁻²	Elongation % in 50.8mm
405	Annealed	414 Min	172 Min	20 Min
409	Annealed	379 Min	207 Min	20 Min
430	Annealed	448 Min	207 Min	20 Min

PHYSICAL PROPERTIES:

Alloy No.	Density gcm ⁻³	Modulus of Elasticity GPa
405	7.75	200
409	7.75	200
430	7.70	200

THERMAL PROPERTIES:

Alloy No.	Thermal Conductivity Wm ⁻¹ K ⁻¹	Coefficient of Expansion 0 - 100°C x 10 ⁻⁶ K ⁻¹
405		10.8
409		10.8
430	22.7	10.4

ELECTRICAL PROPERTIES:

Alloy No.	Electrical Resistivity μOhm cm
405	60
409	60
430	60