


AISI 1215 Steel, cold drawn, 19-38 mm round

Categories: [Metal](#); [Ferrous Metal](#); [Carbon Steel](#); [AISI 1000 Series Steel](#); [Low Carbon Steel](#)

Material Notes: Typical applications are frequently rolled into rods, then drawn into wire. This wire is straightened, cut to length, and used in screw machine operations. This steel series are both rephosphorized and resulfurized.

Key Words: UNS G12150, ASTM A29, ASTM A108, FED QQ-S-637, SAE J412, ISO 683, ISO 683/IX

Physical Properties	Metric	English	Comments
Density	7.87 g/cc	0.284 lb/in ³	Typical for steel.
Mechanical Properties	Metric	English	Comments
Hardness, Brinell	167	167	
Hardness, Knoop	188	188	Converted from Brinell
Hardness, Rockwell B	85	85	Converted from Brinell
Hardness, Vickers	175	175	Converted from Brinell
Tensile Strength, Ultimate	540 MPa	78300 psi	
Tensile Strength, Yield	415 MPa	60200 psi	
Elongation at Break	10 %	10 %	
Reduction of Area	35 %	35 %	
Modulus of Elasticity	200 GPa	29000 ksi	Typical for steel
Bulk Modulus	160 GPa	23200 ksi	Typical for steel.
Poissons Ratio	0.29	0.29	Typical For Steel
Machinability	135 %	135 %	Based on 100% machinability for AISI 1212 steel.
Shear Modulus	80.0 GPa	11600 ksi	Typical for steel.
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000174 ohm-cm	0.0000174 ohm-cm	Typical steel
Thermal Properties	Metric	English	Comments

CTE, linear 	11.5 μm/m-°C @Temperature 20.0 °C	6.39 μin/in-°F @Temperature 68.0 °F	Typical steel
	12.2 μm/m-°C @Temperature 0.000 - 300 °C	6.78 μin/in-°F @Temperature 32.0 - 572 °F	Typical for steel
	13.9 μm/m-°C @Temperature 0.000 - 500 °C	7.72 μin/in-°F @Temperature 32.0 - 932 °F	Typical for steel
Specific Heat Capacity	0.472 J/g-°C	0.113 BTU/lb-°F	Typical steel
Thermal Conductivity	51.9 W/m-K	360 BTU-in/hr-ft ² -°F	Typical steel

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.090 %	<= 0.090 %	
Iron, Fe	98.42 - 98.95 %	98.42 - 98.95 %	As remainder
Manganese, Mn	0.75 - 1.05 %	0.75 - 1.05 %	
Phosphorus, P	0.040 - 0.090 %	0.040 - 0.090 %	
Sulfur, S	0.26 - 0.35 %	0.26 - 0.35 %	



品質證明書 TEST CERTIFICATE

中國鋼鐵股份有限公司
 CHINA STEEL CORPORATION
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客戶名稱 Customer	晉禧工業股份有限公司 CANELLIA METAL CO., LTD.	產品名稱 PRODUCT	ROD-PHOSPHORIZED&RESULFURIZED STEEL		
規格名稱 SPEC.	SAE 1215MS C:0.09 max, Mn:1.10~1.40, P:0.04~0.09 S:0.35 0.42 (SPCA)	標準號碼 STANDARD NO.	KMA0702430	證明書編號 CERTIFICATE NO.	071207B0104
		客戶編號 CUSTOMER NO.	30828910	中鋼訂單編號 CSC ORDER NO.	IN48870
檢驗 INS.	CSC HILL INSPECTION	T/C	01	文運日期 ISSUE DATE	DEC. 06, 2018
		客戶訂單編號 CSC ORDER NO.	PP	證明書日期 T/C ISSUE DATE	DEC. 07, 2018

項目 ITEM NO.	產品序號 SEQ. NO.	尺寸 DIMENSIONS			數量 QTY	質量 kg	檢號 HEAT	化學成分 CHEMICAL COMPOSITION %														備註 REMARKS
		直徑/ mm	寬度 mm	長度 mm				C	Mn	P	S	Si	Ca	Ni	Cr	Al	Mo	N	Nb	Ti	V	
		mm	mm	mm				10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	10 ⁻²	
017	CNS92 01	11.00		0011	10	18.878	10682	6	12.1	48	98	1	1	1	4	1	1	70	Tr	1	Tr	
	TOTAL:			10	18.878																	

註釋
NOTES
Tr: TRACE ELEMENT (S), Cu, Ni, Cr, Mo < 0.02% ; Nb, Ti, V < 0.008% ; OTHER ALSO CONFORM SPEC.)

此證明書所列產品，均依材料規格製造及試驗，並符合規格之要求。
 WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.

Yung-Pau Chen
 冶金技術處處長
 GENERAL MANAGER, METALLURGICAL DEPARTMENT

SURVEYED BY