

## VBC Alloy 0016 Nimonic C263

Designation and Description	MC-TEC* GRADE GTAW Solid Welding Wire Nickel Base	Issued: Mar/2014	MSRR: 9500/16	AMS: 5872E
		Revision: 02		
Cross Reference/ Conformance Specification	MSRR 9500/16 AMS 5966 Omat 3/62 AMS 5872E MSRR 7036	BS EN ISO 18274:2010 NiCr20Co20Mo6Ti2/Ni7263 BS2901-5:1990 NA38 DIN 1736:1985 2.4650 AFNOR NCK 20D UNS N07263		
Metallurgical Background Information	Nimonic C263 is produced by special lubricant free, roller-die forming surface abrasion and cleaning processes. This manufacturing route ensures consistent metallurgical integrity of the alloy and surface physical purity of the welding wire is maintained. Nimonic C263 is a Ni-Cr-Co-Mo precipitation hardening high temperature alloy used for welding similar turbine components			
Materials To Be Welded, Applications and Advice	Aircraft engine sheet components in Nimonic C263 BS HR10, HR 206, HR 404. NCK 20 D AIR 9165 AMS 5872, AMS 5886 All high volume fraction gamma-prime content creep alloys like C263 need heat management and high cleanness for acceptable weld properties. Pure argon shielding and ultra clean weldment preparation required			
Wire Chemistry WT% (as per AMS)	Carbon – 0.04-0.08%	Titanium – 1.90-2.40%		
	Manganese – 0.60% max	Aluminium – 0.30-0.60%		
	Silicon – 0.40% max	Titanium + Aluminium – 2.40-2.80%		
	Phosphorous – 0.015% max	Iron – 0.70% max		
	Sulphur – 0.007% max	Boron – 0.005% max		
	Chromium – 19.0-21.0%	Copper – 0.20% max		
	Cobalt – 19.0-21.0%	Nickel – Balance		
	Molybdenum – 5.60-6.10%			
Weld Properties	Density 8.36 gm/cc Hardness 20Rc, annealed condition * TEC :trace element control			
Sizes and Forms of Supply	Straight Length: 2.5 kg Packs 36" / 914mm lengths Flag tagged		Spooled Wire: Precision layer wound with controlled cast and helix 300mm diameter standard	

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