



## VBC Alloy 0227 IN 901

Designation and Description	<b>MC Tec Grade GTAW Solid Welding Wire Nickel Base</b>	Issued: Nov/2015 Revision: 00	MSRR: 9500/227	AMS:5830 C
Cross Reference/Conformance Specification	MSRR 9500/227 AMS 5830 Omat 3/203 (AMS 5660)	MSRR 7031 DIN 1736:1985 2.4662 UNS Number N09901		
Metallurgical Background Information	<p>VBC Alloy 0227 is produced by vacuum induction melting and remelting techniques and the final wire is produced by special lubricant free, roller die forming followed by surface abrasion and cleaning processes. These manufacturing routes ensure consistent metallurgical integrity of the alloy with regard to control of trace elements and physical purity of the weld wire surface.</p> <p>VBC Alloy 0227 is a high purity. Nickel base precipitation hardening alloy for welding alloys of similar composition.</p>			
Materials To Be Welded, Applications and Advice	Knife edge seal repair, turbine disc shafts and other gas turbine component fabrication. Space rocket components. AMS 5660, 5661, 5884, 5893, 5892. BS 2HR53			
Wire Chemistry WT% (as per AMS)	Carbon – 0.10% max	Titanium - 2.35 – 3.1%		
	Manganese – 1.0% max	Boron – 0.01 – 0.02%		
	Silicon – 0.60% max	Cobalt – 1.0% max		
	Phosphorous – 0.015% max	Aluminium – 0.35% max		
	Sulphur – 0.010% max	Copper – 0.5% max		
	Chromium – 11.0 – 14.0%	Lead – 0.0005% max		
	Nickel – 40.0 – 45.0%	Bismuth – 0.00003% max		
	Molybdenum – 5.0 – 7.0%	Selenium – 0.0003% max		
	Calcium – 0.0010% max	Oxygen – 0.0025% max		
	Nitrogen – 0.005% max	Hydrogen – 0.001% max		
	Iron - Balance			
Weld Properties	Density 8.2 g/cm <sup>3</sup>	Precipitation Hardened – R <sub>c</sub> 32 - 42 Solution Treated – R <sub>b</sub> – 91		
	Tensile Strength – 1225MPa			
Sizes and Forms of Supply	Straight Length: 2.5 kg Packs 36" / 914mm lengths Flag tagged Wide range of Diameters	Spooled Wire: Precision layer wound with controlled cast and helix 300mm diameter standard Wide range of Diameters		

Disclaimer: All information regarding our products is based on applied experience and extensive research work. We provide these technical data in good faith that they are accurate; this does not exempt the user from the obligation to check the information contained herein, especially if the application and process has not been expressly approved by us in writing. We make no guarantees or warranties (express or implied) about the contents of this datasheet. Any changes to processes must be approved by your organisations own quality department. VBC cannot be held responsible for any errors, omissions or inaccuracies published. We may change this datasheet from time to time without notice or obligation to the users. No part of this datasheet or any of its contents may be reproduced, copied, modified or adapted, without the prior written consent of VBC Group