



**MANUFACTURERS OF A DIVERSE RANGE
OF ADVANCED WELDING CONSUMABLES**

**SECTION
11**

WI-0304 DS163 FC-63, Rev. 1, Date 01.05.2009

FC-63	SELF GAS SHIELDING FLUX AND METAL FILLED CORED WIRE FOR HARD FACING APPLICATIONS INVOLVING ABRASION AND IMPACT			DATA SHEET NO. 163				
SPECIFICATION	DIN 8555							
CLASSIFICATION	MF10-65-GC							
PRODUCT DESCRIPTION	<p>A self-shielded flux cored wire which deposits chromium carbides in the weld matrix to have the hardness in the range 60~63 HRC. The deposit has very high hardness which giving resistance to extreme abrasion, high temperature stability and some corrosion resistance. It is not machinable or heat treatable but can be ground.</p> <p>The minerals dissociate during welding to provide a full protective self-shielding gas which eliminates the need for an external separate shielding gas.</p>							
WELDING FEATURES OF THE ELECTRODE	<p>Suitable for use on DC+ only, the strong forceful arc is readily controlable and the high silicon content of the alloy lowers the surface tension of the molten weld pool, thus allowing ease of weaving and thus minimal dilution.</p> <p>Weld beads are bright and smooth and free from porosity. The slag volume is minimal and metal recovery is about 90% with respect to weight of the consumable.</p>							
APPLICATIONS AND MATERIALS TO BE WELDED	Designed for overlay earth moving equipment, dredge pump parts, gyratory crusher cones and mantles. Other parts that are subject to severe wear. It is also suitable for hard surfacing of mild steel, low alloy steel, and manganese steel.							
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Fe
	MIN.	4.5	-	0.7	-	-	40	
	MAX.	5.5	1.5	2.0	0.03	0.04	45	
	TYPICAL	5.0	1.0	1.2	0.005	0.001	42	Bal.
WELD METAL HARDNESS (ALL WELD METAL)	TYPICAL HARDNESS VALUES ON MILD STEEL 150°C INTERPASS TEMPERATURE							
		1 ST LAYER		2 ND LAYER		3 RD LAYER		
	VICKERS (HV)	475 - 575		675 - 750		700 - 840		
	ROCKWELL (HRC)	48 - 54		55 - 60		60 - 63		
WELDING AMPERAGE DC+	Ø (mm)	2.4		2.8		3.2		
	MIN.	250		300		350		
	MAX.	350		400		450		
OTHER DATA	Wires that have become damp should be re-dried at 120°C for 1 hour.							
RELATED PRODUCTS	Please contact our Technical Department for details.							