

PRODUCT LIST

SPECIALISED WELDING AND HARDFACING CONSUMABLES

08/2026

Supply of Welding & Thermal Spray Materials:

- Hardfacing
- Repair and Maintenance
- High-Speed Fabrication
- Cobalt & Nickel-Based
- Stainless Steel
- Cast-Iron Repair
- Exotics

Plus:

- AbrasaPlate Weld-overlay wear plate
- Cast Wear Parts
- Weld, laser-cladding and thermal-spray system



OUR BRANDS:

ABRASAPLATE®
WELD OVERLAY WEAR PLATE

ABRASAPIPE®
WELD OVERLAY WEAR PIPE

CORODUR
DAS ORIGINAL FÜLLDRAHT GMBH
OFFICIAL DISTRIBUTOR

Gold Distributor

böhler
welding by voestalpine

Gold Distributor

utp
by voestalpine

BY MATERIAL TYPE

PAGE	PRODUCT TYPE	PAGE	PRODUCT TYPE
<u>4</u>	<u>BOHLER DIAMONDSARK & UTP ROBOTIC SEAMLESS CORED-WIRES</u>	<u>12</u>	<u>COPPER, ALUMINIUM, TITANIUM, BRAZING</u>
<u>5</u>	<u>BOHLER SUBARC WIRES</u> <u>BOHLER MAINTENANCE ELECTRODES</u>	<u>13</u>	<u>CAST-IRON REPAIR</u>
<u>6</u>	<u>CORODUR HARDFACING WIRES</u>	<u>14</u>	<u>ARC SPRAY, HVOF SPRAY</u>
<u>7</u>	<u>ALLOYS INTERNATIONAL HARDFACING</u>	<u>15</u>	<u>FLAME SPRAY, PLASMA SPRAY</u>
<u>8</u>	<u>CARBON STEEL</u>	<u>16</u>	<u>ABRASAPLATE™ WEAR PLATE</u>
<u>9</u>	<u>STAINLESS STEEL</u>	<u>17</u>	<u>ABRASAPIPE™ WEAR PIPE,</u> <u>CAST WEAR PARTS</u>
<u>10</u>	<u>COBALT-BASED ALLOYS</u>	<u>18</u>	<u>PTA & LASER CLADDING POWDERS</u>
<u>11</u>	<u>NICKEL-BASED ALLOYS</u>	<u>19</u>	<u>CONTACT US</u>

ALLOYS PRODUCT CODES

ALLOYS PRODUCTS ARE ORGANISED IN GROUPINGS BY FAMILY OF ALLOY AND CONSUMABLE TYPE			
<u>AI-01</u> Low Alloy Steel	<u>AI-09</u> Aluminium	<u>AI-19</u> Titanium	
Electrodes and TIG rods	Stick Electrodes	Wire and Rods	
<u>AI-02</u> Stainless Steel	<u>AI-10</u> Plasma	<u>AI-20</u> PTA & Laser Cladding	
Electrodes and TIG rods	Thermal Spray Powders	Powders - 150/180 +45/63µm	
<u>AI-03</u> Nickel-based	<u>AI-11</u> Copper & Aluminium	<u>AI-21</u> Flame Spray Powder -106+20µm	
Electrodes and TIG rods	Brazing and TIG Rods	Colmonoy Fuseweld, Eutectic Eutaloy Torches	
<u>AI-04</u> Cast-Iron-Repair	<u>AI-12</u> Silver Brazing	<u>AI-22</u> Spray & Fuse Powder -106+45µm	
Electrodes and TIG rods	Bare and Coated Rods	for Eutectic Terojet/Terodyne torches	
<u>AI-05</u> Iron-Based Hardfacing	<u>AI-15</u> FCAW	<u>AI-23</u> Spray & Fuse Powder -125+45µm	
Electrodes and TIG Rods	Self-Shielded Flux-Cored Welding Wires	for Metco Size 5P and 6P torches	
<u>AI-06</u> Cobalt-based (Stellite)	<u>AI-16</u> SAW	<u>AI-26</u> HVOF Powders	
Electrodes and TIG rods	Submerged Arc Wires	Thermal Spray Powders	
<u>AI-07</u> Tungsten Carbide	<u>AI-17</u> GMAW	<u>AP-</u> AbrasaPlate™	
Electrodes, grit, composite rods	Gas-Shielded MIG Wires	Weld Overlay Wear Plate	
<u>AI-08</u> Copper	<u>AI-18</u> Arc Spray	<u>AP-</u> AbrasaPipe™	
Stick Electrodes	Thermal Spray Wires	Weld Overlay Wear Pipe	

Products included in this list are some of our key products, but there are many more unusual and obscure products available. If you're looking for something difficult-to-find, there's a good chance we will be able to help you out.

BRAND NAMES USED IN THIS DOCUMENT ARE COMMON INDUSTRY NAMES FOR THE PRODUCTS. STELLITE™, INCONEL™, HASTELLOY™, TRIBALLOY™ AND MONEL™ ARE TRADEMARKS OF KENAMETAL, SPECIAL METALS, HAYNES AND DELORO COMPANIES. ALLOYS INTERNATIONAL CAN SUPPLY BOTH GENUINE AND EQUIVALENT VERSIONS OF MOST ALLOYS. PLEASE DISCUSS DETAILS WITH YOUR SALES ENGINEER. ABRASAPLATE™ AND ABRASAPIPE™ ARE REGISTERED TRADEMARKS OF ALLOYS INTERNATIONAL.

ADVANTAGES OF SEAMLESS-CORED WELDING WIRES

- Lower energy required to melt the wire
- 40% higher deposition rate c/w solid wire
- Wire parameter window for spatter-free welding - eliminates weld cleaning
- Excellent side-wall fusion. Low angle joints with 45-50° preps
- Multiple passes without de-slagging
- The most economical option for automated welding, especially downhand & horizontal
- Lower gas- and tip consumption
- Seamless: no moisture pickup = better mechanicals



PRODUCT	APPLICATION	YIELD STRENGTH	EN ISO STANDARD	Dia. mm	Pack Size kg
		CVN TOUGHNESS	AWS/SFA STANDARD		

SEAMLESS METAL-CORED MIG WIRES

diamondspark 46-MC	Seamless copper-coated metal-cored MIG wire. Multi-purpose fabrication up to 460MPa Yield. Mixed gas.	≤460MPa	17632-A: T46 3 M M21 1 H5	1.0	15
		90J @ -30°C	A5.18: E70C-6M H4	1.2	16, 250
diamondspark Guard 420-MC	As per DS-46MC, but with operator-safety enhanced through lower fume-emissions.	≤460MPa	17632-A: T46 3 M M21 1 H5	1.6	16
		90J @ -30°C	A5.18: E70C-6M H4	1.2	16
diamondspark 54-MC	Seamless copper-coated metal-cored MIG wire. Multi-purpose fabrication up to 460MPa Yield strength. Mixed gas & CO ₂	420-460MPa	17632-A: T46 6 M M21 1 H5	1.6	15, 250
		80J @ -60°C	A5.18: E70C-6M H4	1.6	15
diamondspark Ni1-MC	Seamless copper-coated metal-cored 1% Ni MIG wire for low temp steels up to 500MPa such as QT steels, <1% CTOD. Mixed Gas.	≤500Q&T	17632-A: T50 6 1Ni M M21 1 H5	1.2	16
		90J @ -60°C	A5.28: E80C-Ni1 H4	1.2	16

SEAMLESS RUTILE FLUX-CORED MIG WIRES

diamondspark 52-RC	Seamless copper-coated rutile flux-cored MIG wire for welding steels up to 460 MPa yield. Mixed gas and CO ₂ .	≤460MPa	17632-A: T46 4 P M21 1 H5	1.2	16
		50J at -46°C	A5.20: E71T-1M/T-9M/T-12M JDH4 / E71T-1C/T-9C/T-12C DH4	1.2	16
diamondspark Ni1-RC	Seamless copper-coated rutile flux-cored 1% Ni MIG wire for welding low temperature steels up to 500 MPa. <1% CTOD. Mixed gas.	≤500Q&T	17632-A: T50 6 1Ni P M21 1 H5 17632-A: T46 6 1Ni P C1 1 H5	1.2	15
		75J at -60°C	A5.29: E81T1-Ni1M/C-JH4	1.6	15

SEAMLESS METAL-CORED HARDFACING WIRE

utPROBOTIC 352	Low-medium hardness for metal-to-metal wear, out-of-position hardfacing. Applications: pulleys, chains, crawler rollers, gear wheels. 350HB.	DIN 8555: MSG 6-GF-60-GP	1.2	16
		EN 14700: T Fe 8	1.6	16
utPROBOTIC 600	For parts subject to pressure, impact and abrasive wear. Very stable arc even at very low parameters, low spatter, low slag, possible to weld out of position. 600HB.	DIN 8555: MSG 6-GF-60-GP	1.2	16
		EN 14700: T Fe 8	1.6	16
utPROBOTIC 6011	Seamless, niobium-boron alloyed, metal-cored wire for wear protection with excellent resistance to abrasion induced by sand or minerals. 65HRC.	DIN 8555: MSG 10-GF-65-G	1.2	16
		EN 14700: T Fe 13	1.2	16
utPROBOTIC CHROMELESS 600	Seamless metal-cored hardfacing wire without any hazardous hexavalent chromium or nickel. Meets the most stringent safety standards for CrVI emissions. 60HRC.	EN 14700: T Z Fe 8	1.2	16
			1.2	16

LOW-FUME WIRES FOR ENHANCED OPERATOR SAFETY

Bohler manufacture a range of products specifically designed to reduce hazardous fume emissions. As new Australian welding fume emission standards become active in late 2026, these wires will become necessities for all fabricators and maintenance workshops.

diamondspark Guard 420-MC	diamondspark Guard 420-RC	utPROBOTIC Chromeless 600	utPROBOTIC GUARD 316L-T1
45% fume emission compared to solid wire, 60% compared to folded flux-cored wire.	70% reduction in Manganese fume emission compared to folded flux-cored wires.	600HB seamless metal-cored hardfacing wire with zero chromium or nickel.	90% reduction in Chromium VI emissions compared to standard folded 316L-T1 wires.

VOESTALPINE BOHLER WELDING: GLOBAL EXPERTISE + REGIONAL AVAILABILITY

Alloys International started business in 1982 selling hardfacing electrodes manufactured in Belgium by the business that today is part of Voestalpine Bohler Welding. Bohler have an incredibly diverse product offering, including the most advanced seamless low-emission wires in the world, manufactured in Europe, as well as regionally manufactured (Indonesia, China) products which are economical, have fast delivery, and still carry the Bohler quality seal.

BOHLER SUBMERGED ARC WIRES

diamondspark SEAMLESS CORED SUBARC WIRES			BOHLER SOLID SUBARC WIRES		
diamondspark S 55 HP	AWS A5.17 EC1	EN ISO 14171-A T3	Union S 1	A5.17 EL12	14171-AS1
Seamless, flux-cored SAW for welding unalloyed fine-grained structural steels up to 460MPa yield.			Union S 2	A5.17 EM12	14171-A S2
diamondspark S 550 HP	A5.23 ECF5	14171-A TZ3Ni1Mo	Union S 2 Si	A5.17 EM12K	14171-A S2Si
Flux-cored wire, seamless, for SAW, low alloyed, high strength, high productivity, yield strength > 550 Mpa.			Union S 3	A5.17 EH10	14171-A S3
diamondspark S 700 HP	A5.23 ECF5	26304-A TZ3Ni2.5CrMo	Union S 3 Si	A5.17 EH12K	14171-A S3Si
Flux-cored wire, seamless, for SAW, low alloyed, high strength, high productivity, yield strength > 690 Mpa, Low level of diffusible hydrogen (max 4 ml/100 gr).			Union S1 CrMo2	A5.23 EB3R	24598-A
diamondspark S 770 HP	A5.23 ECF5	26304-A TZ	Union S1 CrMo 5	A5.23 EB6	24598-A S S CrMo5
Flux-cored wire, seamless, for SAW, low alloyed, high strength, for Q&T steels 690 grades with overmatching requirements.			Union S1 CrMo 9	A5.23 EB8	24598-A S S CrMo9
diamondspark S 900 HP	A5.23 ECG	26304-ATZ3Ni2.5CrMoMn1.9	Union S2 CrMo	A5.23 EB2R	24598-A S S CrMo1
Flux-cored wire, seamless, for SAW, low alloyed, high strength, high productivity, yield strength > 900 Mpa, Low level of diffusible hydrogen (max 4 ml/100 gr).			Union S3 Mo	A5.23 EA4	14171-A S3Mo
diamondspark S 960 HP	A5.23 ECG	26304-A TZ3Ni2.5CrMoMn	Union S4 Mo	A5.23 EA3	14171-A S4Mo
Flux-cored wire, seamless, for SAW, low alloyed, high strength, high productivity, yield strength > 960 Mpa, Low level of diffusible hydrogen (max 4 ml/100 gr).			Union S Ni1MoCr	A5.23 EG	26304-A SZ3Ni0.9MoCr
diamondspark S NiCu1	A5.23 ECG	14171-A T2Ni1Cu	Union S2 NiMo 1	A5.23 ENi1	14171-A SZ2Ni1Mo0.3
Flux-cored wire, seamless, for SAW, low alloyed, high strength, Copper-Nickel alloyed for weather resistant steels.			Union S3 MoTiB	A5.23 EA2TiB	14171-A S2MoTiB
			Union S3 TiB	A5.23 EG	14171-A SZ
			Union S3 NiMo	A5.23 EF1 mod	14171-A S3Ni1.5Mo
			Union S3 NiMo 1	A5.23 EF3	26304-A S3Ni1Mo
			Union S3 NiMoCr	A5.23 EF6 mod	26304-A SZ3Ni2.5CrMo

SUBARC FLUXES

UV-C 401-TT	ISO 14174: SA AB 1 67 AC H5	UV-C 418-TT	ISO 14174: SA FB 1 55 AC H5
Aluminate-basic subarc flux for welding general-purpose structural steels, boiler and pipe steels.	25kg bags	Fluoride Basic subarc flux suitable for high strength and cryogenic fine-grained steels.	25kg bags

BOHLER MAINTENANCE ELECTRODES

UTP S 63	A5.4 E307-16	2.5, 3.2mm 15kg cartons	Bohler Fox EV50-1	A5.1 E7018-H4R	2.5, 3.2, 4.0mm 8x2kg vac pac
For buffer layers under hardfacing, joining dissimilar and hardenable materials. Excellent Crack resistance.			Vacuum packed mild steel electrodes in 2kg packs to ensure no hydrogen absorption. Economical fabrication and repair option.		
Avesta 309-17	A5.4 E309-17	2.5, 3.2mm 15kg cartons	Bohler FOXcel 75	A5.5 E7010-P1	4.0, 5.0mm
24Cr/13Ni Stainless suitable for joining dissimilar materials or as a buffer layer. Excellent crack & corrosion resistance.			Cellulose coated electrode for pipeline welding.		
Avesta 312-17	A5.4 E312-17	2.5, 3.2mm 15kg cartons	Avesta 316L-17	A5.4 E316L-17	2.5, 3.2mm 15kg cartons
30Cr/9Ni stainless for welding unknown, dirty and dissimilar materials. Excellent weldability.			18Cr/12Ni/2Mo-Si Stainless for welding 316 stainless steels. Good corrosion resistance to acetic acid, phosphoric acid, acetate and phosphate due to Mo content.		

Corodur manufacture the world's most advanced range of cored hardfacing wires. The 100 series wires have pushed traditional hardfacing consumables into new territory for wear-resistance and impact resistance. Alloys International are the exclusive distributor for Corodur in NSW via www.hardfacing.com.au.

GENERAL PURPOSE HARDFACING

CORODUR 100-SERIES

Corodur 200K	180-200HB (welded) 400HB (work hrdn)	1.2, 1.6mm	Corodur 151	62HRC	1.2, 1.6, 2.0, 2.4, 2.8mm
DIN EN 14700 T Fe 10-200-CKNPZ	EN ISO MF 8-200-CKNPZ	AS/NZS 2576	T Fe 15-55-G	MF 10-53-G	
Work-hardening austenitic wire suitable as a buffer layer under hardfacing, for large build-ups, for joining of dissimilar and difficult-to-weld steels, and for high impact loads.			2460-B7 General purpose chrome carbide hardfacing wire for abrasive applications. The same chemistry as AbrasaPlate AP-3000.		
Corodur 250K	220-250HB (welded) 500HB (work hrdn)	1.2, 1.6mm	Corodur 158	62 HRc	1.2, 1.6, 2.4mm
T Fe 9-250-KNP	MF 7-GF-200-KP	1215-B7	T Fe16-60-G		2460-B7
16Mn 14Cr build-up alloy for high impact applications and repair of hadfield manganese steels. Also suitable as a buffer layer, or for welding over old hardfacings.			Complex carbide (Cr, Nb and V carbides) hardfacing with the addition of manganese to increase impact resistance. Extreme impact resistance plus excellent abrasion resistance. 62 HRC.		
Corodur All-Wear	60-62HRC	1.2, 1.6mm	Corodur 160	62HRC	1.2, 1.6, 2.0, 2.4, 2.8mm
T Fe 8-60-GP	MF 6-60-GP	2460-B7	T Fe 15-65-G	MF 10-GF-65-G	2460-B7
General purpose hardfacing available in MIG or Open Arc versions. Approximately 4 x times better life than standard 600HB hardfacing wires such as 965.			Complex Chrome Carbide with 7% Nb. For high abrasion, moderate impact.		
Corodur 64	64HRC	1.2, 1.6mm	Corodur 165	69HRC	1.6mm
T Fe 16-65-GZ		2465-B7	T Fe16	MF 10-65-GZ	2465-B7
A unique product – the only wire to achieve full hardness in a single layer. 64HRC.			High temperature hardfacing up to 850°C.		
Corodur 607	58HRC	1.2, 1.6, 2.4mm	Corodur 179	68HRC	1.2, 1.6mm
T Fe8-60-GP	MF 6-60-GP	2455-B7	T Fe16-70-GZ	MF 10-70-GZ	2460-B7
Titanium carbide hardfacing for high impact applications, particularly in crushers. 58HRc.			Complex chrome carbide for very high abrasion, moderate impact applications. Best Value Hardfacing Product. Also available for laser cladding Corodur 179L.		
Corodur WZ 55	53-56HRC	1.2, 1.6, 2.4mm	Corodur 189	68HRC	1.6mm
T Fe3	MF 3-55-STW		T Fe16Mod	MF 10-70-GZ	2465-B7
Air hardening wear-resistant tool steel for reclaiming hot-forging dies and to overlay the edges and flat areas of low-alloyed high density tool steels.			The latest hardfacing wire available, abrasion resistance comparable to tungsten carbide without the tungsten price. Also available for laser cladding Corodur 189L.		
Corodur 42	41-44HRC	1.2, 1.6, 2.4mm	COROLIT STELLITE MIG WIRES		
T Fe14	MF 10-45-CGT	2445-B7	Corolit 1	55HRC	1.2, 1.6mm
Wear- and corrosion-resistant alloy. Highly Cr, Ni- and Mo- alloyed. A suitable substitute for Corolit 6 in applications which are not at high temperatures.			ERC CoCr-C Cobalt (Stellite) 1 MIG wire. For resistance to corrosion and friction wear at high temperature. 55HRC at room temperature, excellent hardness retention to 800°C.		
COROCARB TUNGSTEN CARBIDE			Corolit 6	42HRC	1.2, 1.6mm
Corocarb Fe40+	66HRC	1.2, 1.6, 2.4mm	ERC CoCr-A – A low carbon version of Stellite 6. A tough, impact and corrosion resistant alloy for use at high temperature.		
T Fe20	MF 10-70-GZ	2465-B7	Corolit 12	48HRC	1.2, 1.6mm
40% tungsten carbide wire with a reinforced, hardened, iron-based matrix. Similar abrasion resistance to previous generation 60% tungsten carbide hardfacing wires.			ERC CoCr-B Cobalt (Stellite) 12 MIG wire for applications involving high temperature, corrosion and friction. Good impact resistance and edge retention. 48HRc.		
Corocarb Ni60+	68HRC	1.2, 1.6, 2.4mm	Corolit 21	32HRC	1.2, 1.6mm
T Ni20	MF21-55-CGZ	3465-B5	ERC CoCr-E Cobalt (Stellite) 21 MIG Wire for applications involving high temperature, metal to metal wear, corrosion and friction up to temperatures of 1150°C. 32HRc as welded.		
62% tungsten carbide in a nickel matrix, with added hard carbides in the matrix. The best abrasion resistance available.					

Hardfacing is our expertise. Following is a brief selection of the main products available. Please ask for advice about your particular application.

SMAW STICK ELECTRODES			OPEN-ARC FLUX-CORED (O AFC) WIRES		
AI-0538	63HRC	3.2 4.0 5.0mm	AI-15600	600HB	0.9, 1.2mm
38% Chrome Carbide Hardfacing Electrode for abrasion resistant applications (equiv AI-1568 wire).			Entry-level gasless flux-cored martensitic MIG wire ideal for general hardfacing.		
AI-0543	63HRC	3.2, 5.0mm	AI-1568	63HRC	1.2, 1.6, 2.0, 2.4, 2.8mm
Complex Chrome/Niobium Carbide Electrode for extreme abrasion applications (Equiv AI-1543 wire).			General purpose chrome carbide hardfacing wire for abrasive applications. The same chemistry as AbrasaPlate AP-3000.		
AI-0545	65HRC	3.2mm	AI-1558	58HRC	1.2, 1.6, 2.4mm
Hi temp complex carbide hardfacing electrode up to 650°C.			Titanium carbide hardfacing for high impact applications, particularly in crushers.		
BARE RODS (TIG, OXY)			AI-1543	63HRC	1.2, 1.6, 2.4mm
AI-0340B	40HRC	4.0, 5.0mm	Complex Chrome Carbide with 7% Nb. For high abrasion/moderate impact.		
ERNiCr-A 40HRC. Nickel based machineable hard surfacing alloy for parts subject to wear, heat, corrosion and galling.			AI-1558-NbV	62HRC	1.2, 1.6, 2.4mm
AI-0350B	50HRC	4.0, 5.0mm	Complex carbide (Cr, Nb and V carbides) hardfacing with the addition of manganese to increase impact resistance. Extreme impact resistance plus excellent abrasion resistance.		
ERNiCr-B. Nickel based hard surfacing alloy for parts subject to wear, heat, corrosion and galling.			AI-1579Nb	68HRC	1.2, 1.6mm
AI-0360B	60HRC	3.2, 5.0mm	Complex chrome carbide for very high abrasion, moderate impact applications. Best Value Hardfacing Product. Also available for laser cladding.		
ERNiCr-C. Nickel based hard surfacing alloy for parts subject to wear, heat, corrosion and galling. Applications include nickel and gold processing, and motorcycle shoes.			AI-1589	68HRC	1.6mm
WEARtig tool 40	40HRC	1.6mm	Ultimate abrasion resistance, similar to tungsten carbide but at a much lower price. Brand new technology 2026.		
UTP tool steel TIG rod with excellent hot wear resistance and toughness used on hot working tools and structural parts subject to impact, compression and abrasion. Ar/He.			TUNGSTEN CARBIDES		
WEARtig tool 45	45HRC	1.6mm	AI-TC GRIT	3000HV	#8-12, #12-20, #14-20, #16-20, #20-30, #30-40, #40-60
UTP tool steel TIG rod for high stress hot working tools which are subject to high mechanical, thermal and abrasive loads.			Crushed and Sintered Tungsten Carbide Particles for bulk welded Hardfacing. Ideal for use with AI-17600 hardfacing wire matrix. Also available: AI Vibratory Carbide Feeder.		
WEARtig tool 55	55HRC	1.6mm	AI-1779VC	3000HV _{0.1}	1.2, 1.6mm
UTP tool steel highly wear resistant build-ups on parts subject to heavy abrasion and compression combined with moderate impact at elevated temperatures.			62% tungsten carbide in a nickel matrix, with added hard carbides in the matrix. The best abrasion resistance available.		
TUBULAR ELECTRODES			AI-1541	66HRC	1.2, 1.6, 2.4mm
AI-0538-TE	62HRC	6.0mm	40% tungsten carbide wire with a reinforced, hardened, iron-based matrix. Similar abrasion resistance to previous generation 60% tungsten carbide hardfacing wires.		
38% Chrome Carbide Tubular Electrode for abrasion resistant applications. Ideal for out-of-position and difficult-to-weld substrates.			AI-0777-W	2400HV _{0.1}	10-12mm
AI-0543-TE	64HRC	6.0mm	60% Tungsten Carbide Grit/Nickel Matrix composite rods. For oxy welding/brazing. For extreme abrasion applications including ground engaging tools, crushers, shredders. 10-12mm diameter rods. Various carbide grit sizes available ranging from 0.2mm - 8mm.		
Complex Chrome/Niobium Carbide Tubular Electrode for extreme abrasion applications. Ideal for out-of-position and difficult-to-weld substrates.			AI-0799	2400HV _{0.1}	5mm
GAS SHIELDED MIG WIRES			Heterogenous Tungsten Carbide Floppy Rod. For oxy welding. 0.7-1.2mm carbide grit size. 5kg coils.		
AI-17350	350HB	1.2, 1.6mm			
Low-medium hardness for metal-to-metal wear, out-of-position hardfacing. Applications: pulleys, chains, crawler rollers, gear wheels.					
AI-17600SMC	600HB	1.2, 1.6mm			
A seamless, copper coated, martensitic MIG wire for applying crack-free overlays to components subject to impact & abrasion. Outstanding spatter-free welds in all positions.					

Consumables for manual and automated fabrication, as well as repairs and maintenance welding.

MILD STEEL				CREEP RESISTANT			
E70	Mild steel wire and electrodes for general purpose fabrication applications.			B2	CrMo1 – 1.25Cr0.5Mo for joining creep resistant steels.		
SMAW	AI-0150	A5.1 E7016	2.5, 3.2, 4.0, 5.0mm	SMAW	AI-0180	A5.5 E8018-B2	2.5, 3.2mm
Double Coated maintenance electrodes with excellent weldability. Suitable for welding dirty steels.				Stick electrodes			
SMAW	AI-0178	A5.1 E7018-H4R	2.5, 3.2, 4.0mm	Solid TIG	AI-0180S-B2T	A5.28 ER80S-B2	1.6, 2.4mm
Basic-coated iron powder low hydrogen electrodes.				Copper coated solid TIG wire			
SMAW	AI-01EV50-1	A5.1 E7018-H4R	2.5, 3.2, 4.0mm	Solid MIG	AI-1704	A5.28 ER80S-B2	0.9, 1.2mm
Bohler Fox EV50-1 vacuum packed mild steel electrodes.				Copper coated solid MIG wire			
Solid TIG	AI-0111T	A5.18 ER70S-6	1.6, 2.4mm	MIG-FC	AI-1781-B2	A5.29 E81T5-B2	1.2, 1.6mm
Copper coated general purpose wire for mild and low alloy steels.				All-positional, basic flux-cored wire			
Solid MIG	AI-1700	A5.18 ER70-S	0.9, 1.2, 1.6mm	B3	CrMo2 – 2.25Cr1Mo Chrome Moly for joining creep resistant steels. High resistance to hydrogen sulfide.		
Copper coated solid MIG wire for mild and low alloy steels.				SMAW	AI-0190	A5.5 E9018-B3 H4	2.5, 3.2, 4.0mm
MIG-FC	AI-1771T-1C	A5.20 E71T-1C	1.2, 1.6mm	Low Hydrogen basic-coated electrode			
Rutile, All-Positional welding with CO2 gas shielding.				Solid TIG	AI-0190S-B3T	A5.28 ER90S-B3	2.4mm
MIG-FC	AI-1771-B	A5.2 E71T-5MJ	1.2, 1.6mm	Copper-coated solid TIG wire			
Basic flux cored, excellent low temperature toughness.				Solid MIG	AI-1705	A5.28 ER90S-B3	0.9, 1.2mm
MIG-FC	AI-1771-LHM	A5.20 E71T-1M/-9M	1.2, 1.6mm	Copper-coated solid MIG wire			
Titanium all-positional flux-cored wire. Extra low H2, mixed gas.				MIG-FC	AI-1791-B3	A5.29 E91T5-B3	1.2, 1.6mm
MIG-FC	AI-1771-MJ	A5.20 E71T-9MJ	1.2, 1.6mm	Basic FCW for heat-resistant steels. Weld with mixed Ar-CO ₂ gas			
Titanium all-positional flux-core wire, excellent notch toughness at low temps. Mix gas.				B6	CrMo5 – 5Cr 0.5Mo for creep & corrosion resistant steels.		
MIG-FC	AI-1770-MX	A5.20 E70T-1C	1.6, 2.4mm	SMAW	AI-0180-B6	A5.5 E8018-B6	3.2mm
High deposition, low spatter in down hand position with CO2 shielding gas.				Solid TIG	AI-0180S-B6T	A5.28 ER80S-B6	1.6, 2.4mm
MIG-SFC	AI-17DS52RC	A5.20: E71T-1M/T-9M/T-12M	1.2, 1.6mm	Solid MIG	AI-1750	A5.28 ER80S-B6	0.9, 1.2mm
Seamless Rutile-flux-cored all-positional. Mixed gas and CO2.				B8	9Cr1Mo – 9Chrome 1Moly for welding creep resistant steels.		
MIG-SMC	AI-17DS46-MC	A5.18: E70C-6M H4	1.0, 1.2, 1.6mm	Solid TIG	AI-0180S-B8T	A5.28 ER80S-B8	2.4mm
Seamless, copper-coated, metal-cored, high speed fabrication wire with excellent weldability and mechanical properties.				B9	9Cr1Mo – 9Chrome 1 Moly for welding creep resistant, P91 steels.		
HIGH STRENGTH				Solid TIG	AI-0190S-B9T	A5.28 ER90S-B9	1.6, 2.4mm
110	NiCrMo for 2.25Ni 0.3Cr 0.4Mo 110kpsi high tensile steels.			D2	MnMo solid wire for welding 0.5Mo Creep resistant and high tensile steels.		
SMAW	AI-0118	A5.5 E11018-M H4	2.5, 3.2, 4.0mm	Solid TIG	AI-0180S-D2T	A5.28 ER80S-D2	1.6, 2.4mm
Basic-coated electrode, crack resistant. Very low H2 - <3ml.				Solid MIG	AI-1703	A5.28 ER80S-D2	0.9, 1.2mm
Solid TIG	AI-0110T	A5.28 ER110S-1	1.6, 2.4mm	80-G	Bohler Fox DCMS-IG TIG wire for joining 1.25Cr0.5Mo creep resistant steels.		
Copper-coated solid TIG wire.				Solid TIG	AI-0180T	A5.28 ER80S-G	2.4mm
Solid MIG	AI-17110S-1	A5.28 ER110S-1	0.9, 1.2mm	80-Ni1	1% Nickel alloyed for welding high strength steels, and for low temperature applications (-50°C).		
Copper-coated solid MIG wire. All-positional, Ar+CO2 gas				Solid TIG	AI-0180S-Ni1T	A5.28 ER80S-Ni1	2.4mm
Solid MIG	AI-17110S-G	A5.28 ER110S-G	0.9, 1.2mm	MIG-FC	AI-1781-Ni1	E81T1-Ni1M H4	1.2, 1.6mm
Copper free 1.9Ni 0.3Cr 0.5Mo Solid MIG wire. Downhand				Titanium FCW with excellent low temp notch toughness mixed-gas			
MIG-MC	AI-17110-MC	A5.28 E110C-G	1.2mm	MIG-FC	AI-1781-BF	E81T1-C1A4-Ni1 H4 E81T1-M21A4-Ni1 H4	1.2, 1.6mm
Downhand metal-cored wire, mixed gas.				All-positional FCW for CO ₂ and mixed gas with 0.8% Ni at -40°C			
MIG-FC	AI-17110-FC	A5.29 E111T1-GC	1.2, 1.6mm	MIG-SFC	AI-17DSNi1-SFC		
All-positional flux cored high strength MIG wire.				DiamondSpark Ni1 Seamless Copper-coated, rutile flux-cored MIG wire.			
120	Solid wire for 120kpsi high strength steels. Mixed gas.			80-Ni2	2% Nickel for welding low temperature applications with good fracture toughness.		
Solid MIG	AI-1720S-G	A5.28 ER120S-G	0.9, 1.2mm	Solid TIG	AI-0180S-Ni2T	A5.28 ER80S-Ni2	2.4mm
Solid MIG	AI-1720S-1	A5.28 ER120S-1	0.9, 1.2mm				

Consumables for corrosion resistant applications.

AUSTENITIC

16-8-2	For hi temp applications up to 800°C requiring good thermal embrittlement resistance & creep strength.			310	25Cr/20Ni Stainless for high temperature applications up to 1000°C.		
TIG	AI-021682-T	A5.9 ER16-8-2	2.4mm	SMAW	AI-0210	A5.4 E310-16	2.5, 3.2, 4.0, 5.0
253MA	21Cr/10Ni/rare earth (0.05Ce) & nitrogen for outstanding high temperature resistance up to 1100°C.			TIG	AI-0210-T	A5.9 ER310	1.6, 2.4mm
SMAW	AI-0253	ISO 3581 E 22 12 R 12	2.5, 3.2, 4.0mm	MIG	AI-17310	A5.9 ER310	0.9, 1.2mm
TIG	AI-0253-T	EN 1.4835	2.4mm	312	30Cr/9Ni stainless for welding unknown, dirty and dissimilar materials. Excellent weldability.		
MIG	A-17253	EN 1.4835	0.9, 1.2mm	SMAW	AI-0240	A5.4 E312-16	2.5, 3.2mm
307	For buffer layers under hardfacing, joining dissimilar and hardenable materials. Excellent Crack resistance.			SMAW	AI-0250	A5.4 E312-17	1.6 2.0 2.5 3.2 4.0
SMAW	AI-0207	A5.4 E307-16	2.5, 3.2, 4.0mm	TIG	AI-0250-T	A5.9 ER312	1.6, 2.4mm
TIG	AI-0207-T	A5.9 ER307 (Mod)	1.6, 2.4, 3.2mm	MIG	AI-17312	A5.9 ER312	0.9, 1.2mm
MIG	AI-1707	A5.9 ER307 (Mod)	0.9, 1.2, 1.6mm	316L	18Cr/12Ni/2Mo-Si Stainless for welding 316 stainless steels. Good corrosion resistance to acetic acid, phosphoric acid, acetate and phosphorate due to Mo content.		
MIG-FC	AI-1707FC	A5.22 E307T0-4	1.2mm	SMAW	AI-0226	A5.4 E316L-17	1.6, 2.0, 2.5, 3.2, 4, 5
MIG-MC	AI-1707MC	A5.22 EC307	1.2mm	TIG	AI-0226-T	A5.9 ER316L	1.6, 2.4mm
OAFC	AI-1507	A5.22 E307T1-3	1.2, 2.4mm	MIG	AI-1716	A5.9 ER316LSi	0.9, 1.2, 1.6, 2.4mm
308LSi	20Cr/9Ni Stainless for welding 18-8 steels such as 301, 302, 304, 304, 308. Good crack and corrosion resistance.			MIG-FC	AI-1716LFC	A5.22 E316LT1-1 /-4	1.2mm
SMAW	AI-0208	A5.4 E308L-16	2.5, 3.2, 4.0mm	316LMn	<0.5 ferrite content 316 stainless with Mn, for joining cryogenic stainless steels for applications down to -269°C.		
TIG	AI-0208-T	A5.9 ER308LSi	2.4mm	TIG	AI-0226FF	A5.9 ER316LMn	2.4mm
MIG	AI-1708L	A5.9 ER308LSi	0.9, 1.2, 1.6mm	MIG	AI-1716FF	A5.9 ER316LMn	1.2mm
MIG-FC	AI-1708FC	A5.22 E308T0-4	1.2mm	347	20Cr/10Ni + Nb. Suitable for welding 308L, 321 and 347 stabilized stainless steels.		
308H	20Cr/10Ni Stainless with good high-temperature strength due to higher carbon content.			SMAW	AI-0247	A5.4 E347-16	2.5, 4.0mm
SMAW	AI-0208H	A5.4 E309H	2.5,3.2mm	TIG	AI-0247-T	A5.9 ER347	1.6, 2.4mm
TIG	AI-0208H-T	A5.9 ER308H	1.6mm	MIG	AI-17347	A5.9 ER347	0.9, 1.2mm
MIG	AI-1708H	A5.9 ER308H	0.9, 1.2mm	SAW	AI-16437		2.4mm
309L	24Cr/13Ni Stainless suitable for joining dissimilar materials or as a buffer layer. Excellent crack & corrosion resistance.			347H	High carbon version of 34 7. Resistant to inter-crystalline and wet corrosion up to 400°C.		
SMAW	AI-0209	A5.4 E309L-16	2.0, 2.5, 3.2, 4.0mm	SMAW	AI-02347H	A5.4 E347-16	3.2mm
TIG	AI-0209-T	A5.9 ER309LSi	1.6, 2.4mm	TIG	AI-02347H-T	A5.9 ER347H	2.4mm
MIG	AI-1709	A5.9 ER309LSi	0.9, 1.2, 1.6	904L (385)	20Cr/25Ni/4.7Mo/1.5Cu suitable for welding UNS N08904 and other stainless steel. Suitable for welding chemical vessels from steels such as B625, B673, B674 and B677		
MIG-FC	AI-1709LFC	A5.22 E309LT1-1/-4	1.2mm	SMAW	AI-02904	A5.4 E385-16	2.5mm
OAFC	AI-1509	A5.22 E309LT1-3	1.6, 2.8mm	TIG	AI-02904-T	A5.9 ER385	1.6, 2.4mm
SAW	AI-1609		1.6, 2.4mm	MIG	AI-17904	A5.9 ER385	0.9, 1.2mm
309LMo	23Cr/13Ni/2Mo – Better strength and corrosion resistance at high temperature than 309L due to Mo content. Good crack resistance.			MARTENSITIC			
SMAW	AI-0209MoL	A5.4 E309MoL-16	3.2mm	410	13Cr martensite for joining similar designation steels, or overlaying for corrosion and abrasion resistance.		
TIG	AI-0209LMo-T	A5.9 ER309LMo	2.4mm	SMAW	AI-0261	A5.4 E410-	2.5, 3.2, 4.0mm
MIG	AI-1709LMo	A5.9 ER309LMo	0.9, 1.2mm	MIG	AI-17410	A5.9 ER410	1.2mm
MIG-FC	AI-1709LMo-FC	A5.22 E309LMo-T1-1/4	1.2mm	SAW	AI-1610		3.2mm

DUPLEX

2209	22.5Cr/8.5Ni/3Mo/0.15N suitable for welding 22Cr duplex steels such as 2205.		
SMAW	AI-0220	A5.3 E2209-17	2.5, 3.2mm
TIG	AI-0220-T	A5.9 ER2209	1.6, 2.4mm
MIG	AI-17220	A5.9 ER2209	0.9, 1.2mm
MIG-FC	AI-17220FC	A5.22 E2209T1-1/-4	1.2mm
2594	25Cr/9Ni/4Mo/0.25N suitable for welding super duplex stainless such as Zeron 100 and 2507.		
SMAW	AI-02594	A5.4 E2594-16	2.5, 3.2mm
TIG	AI-02594-T	A5.9 ER2594	1.6, 2.4mm
MIG	AI-172594	A5.9 ER2594	0.9, 1.2mm

PRECIPITATION HARDENING

630	17-4PH Precipitation hardened for high strength applications. Heat treatable for increased strength. 930MPa Yield strength.		
MIG	AI-17174PH	A5.9 ER630	1.2mm

420	13Cr Martensite for build up of corrosion and temperature resistant components.		
MIG	AI-17420	A5.9 ER420	1.2, 1.6mm
SAW	AI-1620		2.4, 3.2mm

FERRITIC

430	16Cr Ferritic structure suitable for welding exhaust and muffler systems made of 409 and 430 steel.		
MIG	AI-17430	A5.9 ER430	1.2, 1.6mm
OAFC	AI-15430	A5.22 E420T1-3	1.6mm

Excellent all-round properties for harsh environments involving metal-to-metal wear, temps up to 1000°C, abrasion, impact.

Stellite 1			CoCr-C	55HRC	Stellite 25			EN 14700: T Z Co	45HRC
For resistance to corrosion and friction at high temperature. 55HRC at room temperature, with excellent hardness retention to 800°C.					Tungsten-strengthened cobalt-chrome alloy with exceptional thermal fatigue resistance. Applications include metal-on-metal wear, thermal fatigue and hot corrosion applications such as piercing points, forming tools, extrusion dies, and furnace hardware. Suitable for long-term continuous exposure to 980°C.				
BARE, TIG, Cast Rod	Al-0601B	2.4, 3.2, 4.0, 5.0, 6.4mm			BARE, TIG, Cast Rod	Al-0625B	2.4, 3.2, 4.0mm		
SMAW Electrode	Al-0601E	2.5, 3.2, 4.0, 5.0, 6.4mm			SMAW Electrode	Al-0625E	2.5, 3.2mm		
MIG-Cored Wire	Al-1701	1.2, 1.6mm			MIG-Cored Wire	Al-1725Co	1.2, 1.6mm		
LASER, PTA Powder	Al-2001	-150+63µm							
HVOF Powder	Al-26001	-45+20µm							
ARC SPRAY Wire	Al-1801	1.6mm							
SPRAY & FUSE	Al-2201	-106+45 µm							
Stellite 6			CoCr-A	42HRC	Stellite 31			-	25-35 HRC
For high temperature corrosion and abrasion resistance. Good impact resistance. 42HRC. The most popular Stellite alloy, highly versatile. Can be machined with carbide tools.					Resistant to oxidizing and reducing atmospheres up to 1150°C. Excellent resistance to thermal and mechanical shock. Often used in gas turbine engines in areas subject to hot gas erosion and furnace working tools that require a combination of mechanical integrity and hot wear resistance.				
BARE, TIG, Cast Rod	Al-0606B	2.4, 3.2, 4.0, 5.0mm			BARE, TIG, Cast Rod	Al-0631B	0.9mm		
SMAW Electrode	Al-0606E	2.5, 3.2, 4.0, 5.0mm							
MIG-Cored Wire	Al-1706	1.2, 1.6mm							
LASER, PTA Powder	Al-2006	-150+63µm			Stellite 157				
HVOF Powder	Al-2606	-52+22µm			Similar to Stellite 1 with improved characteristics for flame spray.				
ARC SPRAY Wire	Al-1806	1.6mm			FLAME SPRAY	Al-21157	-106+20µm		
PLASMA	Al-1006	-52+22µm			Stellite 156				
Stellite 6L			CoCr-A	42HRC	Automotive and Military applications.				
A lower-carbon version which helps to reduce lateral cracking in the deposit. Designed for automatic application.					LASER, PTA Powder	Al-20156	-150+63µm		
MIG-Cored Wire	Al-1706L	1.2, 1.6mm			Tribaloy T-800				
LASER, PTA Powder	Al-2006LC	-150+45 µm			Cobalt-based alloy including hard, intermetallic Laves-phases of Mo and Si interspersed in a softer matrix. Ideal for metal-to-metal weld and galling-prevention in applications which can't be lubricated (i.e. high temperature).				
Stellite 12			CoCr-B	48HRC	LASER, PTA Powder	Al-20800	-150+63µm		
For applications involving high temperature, corrosion and friction. Good impact resistance and edge retention. Difficult to machine. Grinding recommended. Often used on saw teeth.					Tribaloy T-900				
BARE, TIG, Cast Rod	Al-0612B	2.4, 3.2, 4.0, 5.0mm			Improved crack-resistance compared to T-800. Weldable at lower temperatures.				
SMAW Electrode	Al-0612E	2.5, 3.2, 4.0, 5.0mm			Laser, PTA Powder	Al-20900	-150+63µm		
MIG-Cored Wire	Al-1712	1.2, 1.6mm			UMCo-50				
LASER, PTA Powder	Al-2012	-150+63µm			2.4778				
HVOF Powder	Al-26012	-53+22µm			240HB				
ARC SPRAY Wire	Al-1812	1.6mm			High temperature alloy with excellent thermal shock resistance, whilst maintaining wear-resistance. Commonly used for coal burner nozzle nozzles.				
SPRAY & FUSE	Al-2212	-106+45 µm			MIG-Cored Wire	Al-17UM50	1.2, 1.6mm		
Stellite 21			CoCr-E	32HRC	Al-1732				
For high temperature metal to metal wear, corrosion and friction up to 1150°C. 32HRC as welded.					EN 14700 T FE 14-45-CGT				
BARE, TIG, Cast Rod	Al-0621B	2.4, 3.2mm			41-44HRC				
SMAW Electrode	Al-0621E	2.5, 3.2mm			Wear- and corrosion-resistant alloy. Highly Cr, Ni- and Mo- alloyed. A suitable substitute for Corolit 6 in applications which are not at high temperatures.				
MIG-Cored Wire	Al-1721	1.2mm			MIG-Cored Wire	Al-1732	1.2, 1.6, 2.4mm		
LASER, PTA Powder	Al-2021	-180+53µm			ARC SPRAY Wire	Al-1832	1.6mm		
HVOF Powder	Al-2621	-53+22µm							

Generally used for extreme chemical exposure and high temperature applications.

Inconel 117			NiCrCoMo-1 For welding Inconel 617. Also good for dissimilar and high temperature alloys.		
GTAW/TIG Rods	AI-0317T	2.4mm	Deloro 40		
SMAW Electrode	AI-0317	3.2, 4.0mm	NiCr-A Nickel-based alloy for resistance to heat, corrosion and galling at high temperatures. Used on engine valves & cams, motorcycle shoes. 40HRC.		
MIG Solid Wire	AI-1717	1.2, 1.6mm	GTAW/TIG Rods	AI-0340B	4.0, 5.0mm
LASER, PTA Powder	AI-20	-150+63µm	HVOF Powder	AI-2640	-52+22µm
HVOF Powder	AI-26	-52+22µm	LASER, PTA Powder	AI-2042	-150+53µm
ARC SPRAY Wire	AI-1817	1.6mm	ARC SPRAY Wire	AI-1840-MF	1.6mm
PLASMA	AI-1006		Deloro 50		
Inconel 182			NiCr-B 50HRC Nickel-based alloy for resistance to heat, corrosion and galling at high temperatures. Used on engine valves & cams, motorcycle shoes.		
GTAW/TIG Rods	AI-0382-T	1.6, 2.4mm	GTAW/TIG Rods	AI-0350B	4.0, 5.0mm
SMAW Electrode	AI-0382	2.5, 3.2, 4.0mm	HVOF Powder	AI-2652	-45+15µm
MIG Solid Wire	AI-1782	1.2, 1.6mm	ARC SPRAY Wire	AI-1850-MF	1.6mm
Inconel 59			HVOF Powder	AI-2652	-52+22µm
NiCrMo-13 Ultra-low carbon for exceptional resistance to severe corrosion.			Deloro 60		
GTAW/TIG Rods	AI-0359-T	1.6, 2.4mm	NiCr-C 60HRC Nickel-based alloy for resistance to heat, corrosion and galling at high temperatures. Used on engine valves & cams, motorcycle shoes.		
SMAW Electrode	AI-0359	2.5, 3.2mm	GTAW/TIG Rods	AI-0360B	3.2, 5.0mm
MIG Solid Wire	AI-1759	1.2mm	MIG Solid Wire	AI-1760	1.2, 1.6mm
Inconel 625			LASER, PTA Powder	AI-2062	-150+63µm
NiCrMo-3 For welding Incoloy 625, 825 alloys and a range of dissimilar materials.			HVOF Powder	AI-2662	-45+15µm
GTAW/TIG Rods	AI-0325-T	2.4mm	Monel 67		
SMAW Electrode	AI-0325	3.2, 4.0mm	CuNi For MONEL450 (70/30 Copper-Nickel) and other copper-nickel alloys.		
MIG Solid Wire	AI-1725	1.2, 1.6mm	GTAW/TIG Rods	AI-0367-T	1.6, 2.4mm
LASER, PTA Powder	AI-20625	-150+53µm	SMAW Electrode	AI-0367	2.5, 3.2, 4.0mm
HVOF Powder	AI-26625	-45+11µm	MIG Solid Wire	AI-1767	1.2, 1.6mm
ARC SPRAY Wire	AI-18625	1.6mm	ARC SPRAY Wire	AI-1867	1.6mm
Inconel 686 CPT			Monel 190		
NiCrMo-14 For duplex, super duplex and super austenitic s/steel, high corrosion resistant.			NiCu-7 70Ni/30Cu For MONEL400, R404 and K-500.		
GTAW/TIG Rods	AI-03686-T	1.6, 2.4mm	GTAW/TIG Rods	AI-0390-T	1.6, 2.4, 3.2mm
SMAW Electrode	AI-03686	2.5, 3.2, 4.0mm	SMAW Electrode	AI-0390	2.5, 3.2, 4.0mm
MIG Solid Wire	AI-17686	1.2, 1.6mm	MIG Solid Wire	AI-1790	0.9, 1.2, 1.6mm
ARC SPRAY Wire	AI-18686	1.6mm	ARC SPRAY Wire	AI-1890	1.6mm
Inconel 718			Hastelloy B		
NiFeCr2 For welding Incoloy 800, 800HT, Inconel 600, 601. Good for dissimilar welding.			NiMo-7 Exceptional resistance to highly reducing environments and chloride-induced stress corrosion cracking. Excellent high temperature strength.		
GTAW/TIG Rods	AI-03718-T	2.4mm	GTAW/TIG Rods	AI-0397-T	1.6, 2.4mm
SMAW Electrode	AI-0318	2.5, 3.2, 4.0mm	SMAW Electrode	AI-0397	2.5, 3.2, 4.0mm
MIG Solid Wire	AI-1718	1.2, 1.6mm	Hastelloy C		
LASER, PTA Powder	AI-20718	-125+45µm	NiCrMo-5 Versatile Corrosion Resistance. *AI-1795Co includes added cobalt.		
HVOF Powder	AI-26718	-52+22µm	GTAW/TIG Rods	AI-0395-T	1.6, 2.4, 3.2mm
ARC SPRAY Wire	AI-18718	1.6mm	SMAW Electrode	AI-0395	2.5, 3.2mm
Incoweld A			MIG Solid Wire	AI-1795Co*	0.9, 1.2, 1.6mm
NiCrFe2 for welding nickel-chrome-iron alloys, 9% nickel steel, and a variety of dissimilar metal joints.			Hastelloy C276		
SMAW Electrode	AI-0315	2.5, 3.2, 4.0mm	NiCrMo-4 Hastelloy C-276, excellent corrosion resistance.		
FM65			GTAW/TIG Rods	AI-0376-T	1.6, 2.4, 3.2mm
NiFeCr-1 For welding alloy 825.			SMAW Electrode	AI-0376	2.5, 3.2mm
GTAW/TIG Rods	AI-0365-T	2.4mm	MIG Solid Wire	AI-1776	0.9, 1.2, 1.6mm
Ni-1			LASER, PTA Powder	AI-2076	-180+53µm
Pure Nickel wire for joining nickel alloys of similar composition such as Nickel 200 and 201.			HVOF Powder	AI-2676	-52+22µm
GTAW/TIG Rods	AI-0399-T	1.6, 2.4mm	ARC SPRAY Wire	AI-1876	1.6mm
SMAW Electrode	AI-0399	2.5, 3.2, 4.0mm	Hastelloy G30		
MIG Solid Wire	AI-1799	1.2, 1.6mm	NiCrMo-11 For resistance to wet process phosphoric acid.		
			GTAW/TIG Rods	AI-0330-T	1.6, 2.4mm
			SMAW Electrode	AI-0330	3.2mm

Copper, aluminium and their alloys provide a combination of corrosion resistance and low density, making them ideal for a range of different welding applications. Alloys stock a large volume of various copper and bronze alloys and can recommend suitable materials for challenging applications.

COPPER

Pure Copper				Bronze			
Deoxidised pure copper is a commonly applied material for repairing copper items, and in combination with other alloys such as 420 stainless, as a common arc spray dimensional restoration material.				General purpose flux coated bronze brazing rods, stick electrodes and plasma spray powder.			
BARE, TIG, Cast Rod	Al-1192	A5.7 ERCu	1.6, 2.4, 3.2mm	Brazing	Al-1108F		2.0, 3.0mm
SMAW Electrode	Al-0800	A5.6 ECu	2.5, 3.2mm	Plasma Spray	Al-1091	Cu-10Al	-90+45µm
MIG-Solid Wire	Al-1792	A5.7 ERCu	1.2, 1.6mm	SMAW Electrode	Al-0808	A5.6 ECuSn-C	2.5, 3.2, 4.0mm
Plasma Spray	Al-1090		-90+45 µm	Brass			
Arc Spray	Al-1892	A5.7 ERCu	1.6mm	Copper-Zinc. High corrosion resistance, soft and malleable. Often used for appearance due to golden colour			
Flame Spray	Al-1106		-106+45 µm	Arc Spray	Al-1898	A5.7 ERCuZn	1.6, 3.2mm
Aluminium Bronze A2				Manganese Bronze			
Provides wear and erosion resistance, plus excellent joining to copper, steel, dissimilar materials, and similar materials.				Used to repair wrought or cast manganese nickel aluminium bronze of similar composition.			
MIG-Solid Wire	Al-1789	A5.7 ERCuAl-A2	0.9, 1.2, 1.6mm	Brazing	Al-1107	A5.7 ERCuMnNiAl	5.0mm
BARE, TIG, Cast Rod	Al-1188	A5.7 ERCuAl-A2	1.6, 2.4, 3.2mm	F-bronze	Al-000F		5.0, 6.4mm
SMAW Electrode	Al-0801	A5.6 ECuAl-A2	3.2, 4.0mm	Tobin Bronze			
LASER, PTA Powder	Al-2033		-150+53 µm	Suitable for brazing brass, bronze, mild steel and ferrous materials.			
Arc Spray	Al-1888	A5.7 ERCuAl-A2	1.6, 3.2mm	Brazing	Al-1108B		5.0mm
Nickel Aly-Bronze				Copper Nickel			
For repairing of cast nickel aluminium bronze components.				Nickel added to copper increases strength, plus resistance to corrosion, particularly from salt water. Good ductility.			
MIG-Solid Wire	Al-1784	A5.7 ERNiCuAl	1.0, 1.2, 1.6mm	MIG-Solid Wire	Al-1767	A5.7 ERCuNi	0.9, 1.2, 1.6mm
Bare Rods	Al-1184	A5.7 ERNiCuAl	1.6, 2.4mm	BARE Cast TIG Rod	Al-0367T	A5.7 ERCuNi	1.6, 2.4, 3.2mm
TIG Rods	Al-0384T	A5.8 ERCuNiAl		SMAW Electrode	Al-0367	A5.6 ECuNi	3.2mm
SMAW Electrode	Al-0384	A5.6 ECuNiAl	3.2, 4.0mm	Arc Spray	Al-1867	A5.7 ERCuNi	1.6mm
LASER, PTA Powder	Al-2084		-150+53 µm	Nickel Copper			
Arc Spray	Al-1884	A5.7 ERNiCuAl	1.6mm	Nickel added to copper increases strength, plus resistance to corrosion, particularly from salt water. Good ductility.			
Silicon Bronze				MIG-Solid Wire	Al-1790	A5.7 ERNiCu-7	0.9, 1.2, 1.6mm
Copper 3% Silicon, used for arc welding copper-silicon and copper-zinc base metals.				BARE Cast TIG Rod	Al-0390T	A5.7 ENiCu-7	1.6, 2.4, 3.2mm
MIG-Solid Wire	Al-1786	A5.7 ERCuSi-A	0.9, 1.2mm	SMAW Electrode	Al-0390	A5.6 ENiCu7	2.5, 3.2, 4.0mm
Bare Rods	Al-1186	A5.7 ERCuSi-A	1.6, 2.4mm	Phosphor Bronze			
Arc Spray	Al-1886	A5.7 ERCuSi-A	1.6mm	Copper, 5% tin with up to 0.35% phosphor added as a deoxidizer. Can be used to weld bronze and brass, plus pure copper, if tin in the weld metal is acceptable.			
TITANIUM TIG WIRES				MIG-Solid Wire	Al-1787	A5.7 ERCuSn	1.2, 1.6mm
Ti-1	Al-1901T	A5.16 ERTi-1	0.9, 1.6, 2.4, 3.2mm	Bare Rods	Al-1187	A5.7 RBCuSn-C	1.6, 2.4mm
Ti-2	Al-1902T	A5.16 ERTi-2	0.9, 1.6, 2.4, 3.2mm	Laser	Al-2090	-	-150+53 µm
Ti-3	Al-1903T	A5.16 ERTi-3	1.6, 2.4mm	ALUMINIUM			
Ti-5	Al-1905T	A5.16 ERTi-5	1.6, 2.4, 3.2mm	4043 Aluminium			
Ti-7	Al-1907T	A5.16 ERTi-7	1.6, 2.4, 3.2mm	ER4043 Aluminium 5% Silicon.			
Ti-12	Al-1912T	A5.16 ERTi-12	0.9, 1.6, 2.4, 3.2mm	TIG Rods	Al-1143	ER4043	2.4, 3.2mm
SILVER BRAZING				MIG Wire	Al-1743	ER4043	1.2mm
2%	Al-1202	A5.8-B CuP6	1.6, 2.4, 3.2mm	4047 Aluminium			
5%	Al-1205	A5.8-B CuP7	2.4, 3.2mm	ER4043 Aluminium 10% Silicon.			
15%	Al-1215	A5.8-B CuP5	1.6, 2.4mm	TIG Rods	Al-1147	ER4047	1.6, 2.4mm
45%	Al-1245	A5.8-BAG-1	1.6, 2.4mm	SMAW Electrodes	Al-0912	E4047	2.5, 3.2, 4.0mm
50%	Al-1250	A5.8 BAg-6	1.6, 2.4, 3.0mm	MIG Wire	Al-1747	ER4047	1.2mm
56%	Al-1256	A5.8 BAg-7	1.6, 2.4, 3.0mm	5356 Aluminium			
				ER5356 Aluminium Magnesium.			
				TIG Rods	Al-1156	ER5356	2.4, 3.2mm
				MIG Wire	Al-1753	ER5356	0.9, 1.2mm
				5183 Aluminium			
				ER5183 Aluminium Magnesium high strength for seawater resistance.			
				MIG Wire	Al-1156	ER5356	1.2, 1.6mm

Cast-Irons are carbon steel alloys with a minimum 2% carbon. This high carbon makes cast-irons difficult-to-weld and inherently fragile, due to the iron carbides formed during welding. To minimise these, extra care must be taken with choice of welding consumable and procedure. For localised repairs when furnace pre- and post- weld heat treatment is not available, temperatures should be kept as low as possible, 70-120°C during weld.

PRODUCT		DESCRIPTION	APPLICATIONS		mm				
GMAW MIG	AI-1755-CI	55Ni/44Fe/1.2C High-efficiency high-speed solid ferro-nickel MIG wire. Up to 8kg/hour weld speed. Pre-and post- weld heat treatment not usually required. Excellent wetting and crack-resistant weldability	Production-line fabrication of cast iron parts. Maintenance welding of rollers, casting defects, crack repairs.		1.2				
	A5.15 ERNiFe-CI				1.6				
	AI-1767-CI	70Cu/30Ni/0.5Ti solid MIG wire for the build-up, overlay and joining of cast iron. Fully machineable in a single pass, even through the fusion zone, with high-speed tooling.	Apply in stringer beads with only a slight side-to-side oscillation. All craters must be back-filled. Use a slightly convex bead.		0.9				
	A5.7 ERCuNi				1.2				
	AI-1799-CI	Pure nickel for fabricating and repair of nodular, SG and grey cast irons. Contains no Fe, so no hardness picked-up from base metal. Excellent machineability even after a single pass. Excellent resistance to fretting and spalling.	Welding of listed cast iron types to each other or to steel. 0.9mm wire especially useful for out-of-position bore welding.		0.9				
A5.15 ERNi-CI				1.2					
GTAW TIG	AI-0367-T	70Cu/30Ni/0.5Ti solid TIG wire for the build-up, overlay and joining of cast iron. Fully machineable in a single pass, even through the fusion zone.	Apply in stringer beads with only a slight side-to-side oscillation. All craters must be back-filled. Use a slightly convex bead.		1.6				
	A5.7 ERCuNi				2.4				
					3.2				
	AI-0399-T	96Ni/3Ti/1Al TIG wire for joining and overlaying Nickel 200 and cast irons. Excellent for TIG wire joining over overlay of grades such as Nickel 200, Nickel 201, ASTM B160-B163, B725 and B730.	Excellent for joining dissimilar nickel-alloys, to stainless or ferritic steels, and cast irons.		1.6				
	A5.14 ERNi-1				2.4				
SMAW - STICK ELECTRODES	AI-0412	Pure nickel cored electrode with a graphite-basic coating. Homogeneous and easy-to-machine.	Recommended for cold welding and repairing of gray cast iron, repairing cracks.		5.0				
	A5.15 ENi-CI DIN 8573 E Ni BG 11								
	AI-0412G	97% nickel, graphite coated. Machineable. Graphite coating ensures easy conduction, stable arc.	Joining cast iron to steel. Welding thin sections.		2.5				
	A5.15 ENi-CI ISO 1071 E C Ni-CI 3				3.2				
	AI-0420	High Strength, ideal for dirty or contaminated surfaces. All positional, excellent strike, smooth and stable arc.	High strength excellent for joins of thick sections, or between nodular & high phosphorous Cis and steels.		2.5				
	A5.15 ENiFe-CI DIN 8573 E-Ni Fe-G22				3.2				
	AI-0420G	Graphite-basic coating and Bimetal core wire with high electrical conductivity. Excellent weld-speed in DC and AC without any risk of overheating the electrode (common problem with conventional Ferro-Nickel electrodes).	For repair and construction welding on all cast iron types and dissimilar joints between cast iron and steels.		2.5				
	A5.15 ENiFe-CI DIN 8573 E NiFe-1 BG 21				3.2				
	AI-0425	Graphite basic coated ferro-nickel electrode for repairing nodular cast iron. Sound deposit, highly resistant against cracks. Good bonding and flow of weldmetal.	Particularly recommended for dissimilar joining of cast iron to steels, and constructions of cast iron.		4.0				
	A5.15 ENiFe-CI DIN 8573 E NiFe-1 BG 12								
AI-0435	DC Electrode Positive. Reduced penetration to reduce temperature in workpiece.	For cold welding of cast iron.		2.5					
A5.15 ENiFe-CI DIN 8573 ENiFe G23				3.2					
				4.0					
AI-0440	Basic graphic coated electrode for hot welding nodular Cast iron. Colour and structure matching deposit. Stable arc, can weld over hot slag. Good bonding and flow of the weld metal.	Sealing dirty/contaminated cast irons prior to overlay with AI-0412, AI-0420 or AI-0435. Casting Defect Repair.		3.2					
A5.15 ECI-B DIN 8573 EFeC-G-BG 42				4.0					
AI-0460	Nickel Iron with copper flashed core. Improved current transfer for lower temperature welding, including out-of-position in DC or AC mode.	Maintenance repair of all types of cast irons, particularly malleable, nodular and phosphorous.		2.5					
				3.2					
				4.0					
CAST IRON ELECTRODE COLD WELDING COMPARISON		AI-0412	AI-0412G	AI-0420	AI-0420G	AI-0425	AI-0435	AI-0460	AI-0440
APPLICATIONS	Buffer layer for old cast irons	✓	✓	✓ ✓	✓	✓	✓	✓ ✓	HOMOGENEOUS HOT WELDING
	“Unknown” cast iron	✓ ✓ ✓	✓ ✓ ✓	✓	✓	✓	✓	✓	
	Worn cast-iron	✓ ✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓	✓	✓ ✓	✓ ✓	
	Lamellar cast iron	✓ ✓ ✓	✓ ✓ ✓	✓	✓	✓	✓	✓ ✓	
	Nodular cast iron	✓	✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	
Dissimilar assemblies	XXX	XXX	✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓		
FEATURES	Mechanical properties	✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓	
	Crack Resistance	✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓	
	Ability not to redden	✓	✓ ✓	✓	✓ ✓ ✓	✓	✓ ✓ ✓	✓ ✓	
	Ease of Handling	✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓	
Unsuitable XXX		Acceptable ✓			Good ✓ ✓			Excellent ✓ ✓ ✓	

ARC SPRAY WIRES

Twin-Wire Arc spraying uses a MIG power source to arc two wires together and then blow the molten metal onto the substrate with compressed air. One of the most economical forms of metal spray, it can apply a wide variety of materials very quickly. Popular for restoring worn surfaces; corrosion and wear-resistant coatings over large areas.

AI-1800	The superior bond wire. 90Ni/5Al/5Mo. Over 76MPa bond strength on blasted surface.	1.6	AI-1866	Low shrink arc spray wire suitable for high coating thicknesses. Can be machined or ground. For applications requiring high coating thickness.	1.6
AI-1804	Self-bonding nickel-based wire. Can be machined to a feathered edge and excellent surface finish. 66MPa bond strength. Low-shrink coating suitable for dimensional restoration, bearing and seal journals.	1.6	AI-1867	Copper-Nickel wire, suitable for combining with AI-1822 for a machineable, tough coating. Applications: bearing journals, dimensional restoration.	1.6
AI-1805	Corrosion resistant self-bonding stainless wire for dimensional restoration. 57MPa bond strength.	1.6	AI-1870	The ultimate in wear-resistant coatings for a variety of applications in service up to 900°C. Outstanding sprayability. Work hardens to 55HRC.	1.6
AI-1820	80Ni/20Cr bond wire, for applications not suitable for aluminium. 48MPa bond strength.	1.6	AI-1875	95Ni/5Al bond wire. 67MPa bond strength.	1.6
AI-1822	420 stainless steel wire made exclusively for arc spraying. Produces a hard, tough coating for bearing journal repairs.	1.6	AI-1885	85Zn/15Al for structural corrosion protection. Larger diameters also available.	1.6
AI-1830	Low alloy arc spray wire.	1.6	AI-1886	Silicon Bronze for arc spray.	1.6
AI-1833	430 Stainless Steel arc spray wire.	1.6	AI-1887	Phosphor Bronze for arc spray.	1.6
AI-1843	4043 Aluminium/5% Silicon Arc Spray wire.	1.6	AI-1888	Aluminium bronze for arc spray. Suitable for high build thickness and corrosion resistance.	1.6
AI-1844	316 Stainless Steel arc spray wire.	1.6	AI-1889	Tin Babbit wire suitable for bearing journal restoration.	2.0
AI-1850MF	Nickel-based wire for arc spray and subsequent fusing. 50-55HRC. Suitable for applications involving severe high-stress abrasion with low impact, <450°C, Exhaust fans, boiler tubes.	1.6	AI-1892	Deoxidised copper. Popular when mixed with AI-1822 for dimensional restoration.	1.6
AI-1860BC	Boron-carbide reinforced Inconel 625 for high temperature abrasion and corrosion resistance. Ideal for boiler tube hardfacing.	1.6	AI-1893	Pure Aluminium wire for arc spraying. Excellent wire feed characteristics. Larger sizes available.	1.6 2.3 3.2
			AI-1894	Pure Zinc wire for structural corrosion protection. Larger sizes available.	1.6 2.3 3.2

HVOF/HVAF POWDERS

HVOF is generally used for applying thin, hard coatings to restore worn dimensions and prevent further wear. Often used on sealing surfaces, for hydraulic cylinders, boiler tubes, valves and pumps. Alloys have most powders available in multiple cuts, including -53+22 and -45+15 for the major HVOF gun types on the market.

AI-26001	Stellite 1 Powder	AI-2672	88WC/12Co Tungsten Carbide for abrasion resistance
AI-26012	Stellite 12 Powder	AI-2675	75CrC/25NiCr 75 Chrome Carbide, 25 Nickel/Chrome
AI-2601	90WC/10Ni	AI-2680	80CrC/20NiCr 80Chrome Carbide/20 Nickel/Chrome
AI-26021	Stellite 21 Powder	AI-2682	316 Stainless HVOF powder
AI-2606	Stellite 6	AI-2685	70WC/24CrC/6NiCr Tungsten Carbide for applications requiring thin, hard abrasion resistant coatings with additional corrosion resistance. Cobalt-free.
AI-26332	Tungsten Carbide/Hastelloy C powder for resistance to corrosion and abrasion at high temperatures.	AI-2686	86WC/10Co/4Cr Premium abrasion resistance
AI-2645	Nickel Chrome Silicon Boron 45HRC		
AI-2652	Nickel Chrome Silicon Boron 50HRC		
AI-2662	Nickel Chrome Silicon Boron 60HRC		
AI-26625	Inconel 625 Nickel-based powder		

FLAME SPRAY POWDERS

CODE	DESCRIPTION	SYSTEMS	POWDER SIZE
AI-21xx	Puffer torch flame spray powders	Colmonoy Fuseweld & Eutectic Eutalloy	-106+20µm
AI-22xx	Spray and fuse	Eutectic Terojet/Terodyne	-106+45µm
AI-23xx	Spray and fuse	Miller FP71, P73 UniSpray Jet. Metco 5P, 6P	-125+45µm
Flame spray is the original metal-spray, heating metal powders using oxy-fuel, flame spray processes have the advantage of requiring very little capital outlay, so can be useful when only required for occasional jobs. A wide variety of materials can be sprayed, typically either for dimensional restoration or for hard surfacing. Coatings may be subsequently fused to reduce porosity and increase hardness. Plastic powders are also sprayed for various corrosion, dielectric and non-stick applications.			
AI-2126	-106+20µm	25-27HRc	AI-2242 -106+45µm 40HRc
Nickel based flame spray powder for application by puffer torch. For repair of steel or cast iron parts. Excellent colour match to cast iron. Easily machinable.		Sprayweld spray&fuse NiCrSiB powder, for surfacing parts subject to the effects of abrasion and corrosion. Possible to machine, best finish achieved by grinding.	
AI-2134	-106+20µm	30-35HRc	AI-2340-W -125+45µm 60HRc
Fuseweld powder for reclamation of undersized or worn parts. Ideally suited to using on steel, cast steel, grey cast iron and stainless steels.		Self-fluxing spray fuse tungsten carbide powder in nickel matrix, for applications involving high abrasion and high heat. Excellent resistance to hot corrosion and galling.	
AI-2137	-106+20µm	35-40HRc	AI-2342-CM -125+45µm 35-40HRc
Also known as WC-237. NiCrSiBMo Fuseweld powder. 35-40HRC, can be machined with carbide tools.		Colmonoy 42 CM	
AI-2153	-106+20µm	49-53HRc	AI-2342-CS -125+45µm 35-40HRc
Puffer torch fuseweld powder can be applied to grey cast iron, cast steel, steel, stainless steel for wear resistant applications.		Colmonoy 42 CS	
AI-2163	-106+20µm	57-62HRc	AI-2369 -125+45µm 65HRc
Fuseweld powder that resists the combined effects of wear, corrosion, and oxidation at elevated temperatures.		NiCrSiBCuMo Sprayfuse powder. Excellent resistance to sagging, so thick coatings can be applied. Excellent resistance to abrasion and high temperatures. Ideal for surfacing of glass bottle molds.	
AI-2175-W	-106+20µm	75HRc	AI-2380 -125+45µm
Tungsten bearing fuseweld powder for application by flame spray, and subsequent fusing to provide a metallurgical bond with the base metal. For resistance to extreme abrasion, and corrosion.		Colmonoy 8M Spray Fuse Powder	
		AI-RILSAN	75 Shore D
		Nylon powder for coating rollers in offset printing machines. Very low friction, outstanding chemical resistance.	

DC PLASMA SPRAY POWDERS

DC Plasma thermal spray systems are predominantly used for applying high-melting temperature ceramic coatings. The coatings are generally thin and hard, and used in extreme temperature and corrosion applications. Coatings need to be ground and cannot be machined. Coatings typically include significant porosity, which requires post-coating sealant.

AI-1010	Al ₂ O ₃ Alumina powder	-45+22µm	AI-1036	Chrome Oxide/Silicon Dioxide/Titanium Dioxide 92Cr ₂ O ₃ -5SiO ₂ -3TiO ₂ powder	-45+22µm
AI-1011	Al ₂ O ₃ /3TiO Alumina/Titania powder	-45+22µm	AI-1087	90Ni/5Al/5Mo super-bond powder. -90+45µm. Equivalent to AI-1800 arc spray wire.	-90+45µm
AI-1015	Nickel/Chrome 80/20 bond powder	-106+45µm			
AI-1020	Spherical Aluminium powder	-90+45µm	AI-1091	Aluminium Bronze powder, low shrink. 90Cu10Al.	-90+45µm
AI-1025	Chrome oxide ceramic for corrosion protection.	-38+10µm			
AI-1033	Magnesium Zirconate/Chrome Oxide 25MgO/75CrO Powder	-90+11µm	AI-1097	Titanium Dioxide TiO ₂ Powder	-45+22µm

AbrasaPlate Chrome Carbide Weld Overlay Wearplate. Available as stock-sheets, or full fabrications. Can be rolled, plasma cut, welded, fixed with welded studs or countersunk inserts.

GRADE	DESCRIPTION						AVAILABILITY
AP-3000	Chrome Carbide Hardfacing Overlay.						Ex-Stock
AP-3000-T	Added tungsten for increased abrasion resistance. "Spec 3"						Ex-Stock
AP-6000	High Temperature Plate to 600°C. Made-to-order						Made-to-order
AP-7000Nb	With added Nb for increased abrasion and impact resistance						Made-to-order
AP-X	3mm thick cross hatch overlay on top of main hardfacing layer. Self protecting "rock box" effect.						Ex-Stock
AP-CF	Smooth overlay, "Crack Free"						Ex-Stock
-S	Any grade can be manufactured on stainless backing plate.						Min Stock
AP-L	Thin plates down to 2on2 or 1on3 manufactured with pulse laser cladding.						Ex-Stock
Grade	HF on MS	mm	kg /m ²	Stock Code	Sheet Size	Beads ll to	
AP-3000	3on3	6	48	AP-U3-0303-1530	1.5 x 3.0	1.5	
	4on4	8	65	AP-U3-0404-1530	1.5 x 3.0	1.5	
	4on6	10	81	AP-U3-0406-1530	1.5 x 3.0	1.5	
				AP-U3-0406-2230	2.2 x 3.0	2.2	
	6on6	12	96	AP-U3-0606-1530	1.5 x 3.0	1.5	
				AP-U3-0606-2230	2.2 x 3.0	2.2	
	6on8	14	110	AP-U3-0608-1530	1.5 x 3.0	1.5	
				AP-U3-0608-2230	2.2 x 3.0	2.2	
	8on6	14	111	AP-U3-0806-1530	1.5 x 3.0	1.5	
				AP-U3-0806-2230	2.2 x 3.0	2.2	
	8on8	16	124	AP-U3-0808-1530	1.5 x 3.0	1.5	
				AP-U3-0808-2230	2.2 x 3.0	2.2	
	9on10	19	150	AP-U3-0910-1530	1.5 x 3.0	1.5	
				AP-U3-0910-2230	2.2 x 3.0	2.2	
	9on16	25	204	AP-U3-0916-2230	2.2 x 3.0	2.2	
	12on8	20	158	AP-U3-1208-2230	2.2 x 3.0	2.2	
	12on12	24	189	AP-U3-1212-2230	2.2 x 3.0	2.2	
AP-3000T TUNGSTEN	17on12	29	229	AP-U3-1712-1530	1.5 x 3.0	3.0	
				AP-U3-1712-2230	2.2 x 3.0	2.2	
	20on12	32	253	AP-U3-2012-2230	2.2 x 3.0	2.2	
	6on6	12	96	AP-H3T-0606-2230	2.2 x 3.0	3.0	
	8on6	14	111	AP-H3T-0806-2230	2.2 x 3.0	3.0	
AP-X CROSHATCH	9on10	19	150	AP-H3T-0910-2230	2.2 x 3.0	3.0	N/A
	12on8	20	158	AP-H3T-1208-2230	2.2 x 3.0	3.0	
	20on12	32	253	AP-H3T-2012-2230	2.2 x 3.0	3.0	
	4on4	11	75	AP-U3X-0404-1530	1.5 x 3.0		
				AP-U3X-0406-1530	1.5 x 3.0		
	4on6	13	92	AP-U3X-0406-2230	2.2 x 3.0		
				AP-U3X-0606-2230	2.2 x 3.0		
	6on6	15	107	AP-U3X-0608-1530	1.5 x 3.0		
AP-CF CRACK FREE	6on8	17	120	AP-U3X-0806-1530	1.5 x 3.0		NA
	8on6	17	120	AP-U3X-0910-1530	1.5 x 3.0		
	9on10	22	160	AP-U3X-0910-2230	2.2 x 3.0		
				AP-U3X-1212-1530	1.5 x 3.0		
AP-3S STAINLESS	6on6	12	97	AP-UCF-0606-1428	1.4 x 2.8		NA
	9on7	16	125	AP-WCF-0907-1030	1.0 x 3.0		
	10on10	16	125	AP-UCF-1010-1428	1.4 x 2.8		
AP-XS STAINLESS CROSS HATCH	6on6	12	96	AP-U3S-0606-1930	1.9 x 3.0	1.9	NA
	9on10	19	150	AP-U3S-0910-1930	1.9 x 3.0	1.9	
AP-L LIGHTWEIGHT	3on6	12	84	AP-U3XS-0306-1930	1.9 x 3.0		NA
	6on6	15	107	AP-U3XS-0606-1930	1.9 x 3.0		
AP-L LIGHTWEIGHT	1on3	4	32	AP-HL-0103-0530	0.5 x 3.0	3.0	
	2on3	5	40	AP-HL-0203-0530	0.5 x 3.0	3.0	

AbrasaPipe Chrome-Carbide Hardfaced pipe helps extend the life of pipes in abrasive applications. Can be formed, welded, lobster back, and fabricated to sizes as small as 50mm ID. Stocked items are welded on Sch40 mild steel pipes, can be made to any custom size required.

STOCK CODE	PIPE SIZE “	PIPE SIZE NB	OD (mm)	WT (mm)	HF THICKNESS (mm)	ID (mm)	STOCKED LENGTHS (m)
AP-U3P-0406-089X1000	3”	80NB	89	6	4	69	1.0
AP-U3P-0406-114X1000	4”	100NB	114	6	4	94	1.0
AP-U3P-0606-168X1500	6”	150NB	168	6	6	144	1.5
AP-U3P-0608-219X1500	8”	200NB	219	8	6	191	1.5
AP-U3P-0608-273X1500	10”	250NB	273	9	6	243	1.5
AP-U3P-0610-323X1500	12”	300NB	323	10	6	291	1.5
AP-U3P-0811-356X1500	14”	350NB	356	11	8	318	1.5
AP-U3P-0912-406X1500	16”	400NB	406	12.7	10	360	1.5
AP-U3P-0910-426X1500	16”	400NB	426	10	9	388	1.5



WHITE IRON WEAR PARTS

High Chrome white-iron castings are frequently used for wear-resistant applications including high-impact and moderate abrasion. Standard cast wear parts consist of the hard wear material brazed onto a mild steel backing, which can then be welded onto the wearing component. Chock blocks and wear buttons come in a range of standard sizes, and are available ex-stock. These are an economical option compared to AbrasaPlate, which has better abrasion resistance.

CHOCKY BLOCKS

STOCK CODE	SIZE	WEIGHT
AI-CB25-N	240x25x23mm (15on8)	0.9
AI-CB40-N	240x40x23mm (15on8)	1.5
AI-CB50-N	240x50x23mm (15on8)	1.9
AI-CB65-N	240x65x23mm (15on8)	2.5
AI-CB90-N	240x90x29mm (15on8)	3.5
AI-CB100-N	240x100x23mm (15on8)	3.9
AI-CB130-N	240x130x23mm (15on8)	5.2

WEAR BUTTONS

STOCK CODE	SIZE	WEIGHT
AI-CBWB-50	50dia x 25 (17on8)	0.4
AI-CBWB-60	60dia x 25 (17on8)	0.6
AI-CBWB-75	75dia x 25 (17on8)	1.0
AI-CBWB-90	90dia x 30 (20on10)	1.5
AI-CBWB-150x32	150dia x 32 (20on12)	4.6
AI-CBWB-150x41	150dia x 41 (29on12)	5.7



PLASMA-TRANSFERRED ARC (PTAW) & LASER CLADDING POWDERS

PTA welding and Laser cladding provide the lowest dilution of all weld overlay processes. Typically applied robotically, the low dilution allows the full mechanical benefits of the overlay material to be achieved in a relatively thin coating, without dilution from the substrate. In many cases, laser cladding enables a metallurgically-bonded overlay to be applied without subsequent heat treatment being necessary. Many powders are available in multiple cuts for popular systems. Most commonly -150+53, -125+45, -106+25µm.

COBALT-BASED				STAINLESS STEELS			
Stellite 1	For resistance to corrosion and friction at high temperature. 55HRC at room temperature, with excellent hardness retention to 800°C.			307	Austenitic stainless ideal for use as buffer layers under hard-facing. Work hardening due to manganese, good hot-cacking resistance and thermal stability.		
	Al-2001	CoCr-C	-150+53µm		Al-20307	20Cr10Ni5Mn	-150+53µm
Stellite 6	For high temperature corrosion and abrasion resistance. Good impact resistance. 42HRC. The most popular Stellite alloy, highly versatile. Can be machined with carbide tools.			309L	309L – Gas atomized. Ideal for use as buffer layer, or for joining dissimilar materials.		
	Al-2006	CoCr-A	-150+53µm		Al-20309	23Cr13Ni1Mn	-150+53µm
Stellite 6L	A lower-carbon version which helps to reduce lateral cracking in the deposit. Designed for automatic application.			316L	316 stainless steel for corrosion resistant overlays on similar base materials.		
	Al-2006LC	CoCr-A	-150+45µm		Al-2082	17Cr12Ni2.5Mo2.3Si	-150+53µm
Stellite 12	For applications involving high temperature, corrosion and friction. Good impact resistance and edge retention.			410L	410L martensitic stainless steel powder for moderate corrosion resistance, good toughness. Also used as an economical build-up material.		
	Al-2012	CoCr-B	-150+53µm		Al-20410L	12.5Cr	-150+53µm
Stellite 21	For high temperature metal to metal wear, corrosion and friction up to 1150°C. 32HRC as welded.			420	420 stainless steel powder.		
	Al-2021	CoCr-E	-180+53-µm		Al-20420	13Cr	-150+53µm
T-800	Triballoy T-800 Cobalt-based alloy with excellent galling/metal-to-metal resistance at high temperatures. 55-60HRC.			430	430 ferritic stainless has adequate resistance to oxidation. High temperature and exhaust applications.		
	Al-20800	-	-150+53µm		Al-20430	16Cr	-150+53µm
T-900	Triballoy T-900 Similar to Al-2080 but with higher ductility. 55-60HRC.			431	431 stainless martensitic high strength powder for restoration of shafts and worn components.		
	Al-20900	-	-150+53µm		Al-20431-	16Cr 1.75Ni	-105+45µm
NICKEL-BASED				COPPER-BASED			
Deloro 40	Deloro 40 NiCrSiB 40HRC.			CuAl	Aluminium Bronze		
	Al-2042	NiCr-A	-150+53µm		Al-2033	90Cu10Al	-150+53µm
Deloro 50	Deloro 50 NiCrSiB powder 50HRC.			CuAlNi	Nickel aluminium bronze has good resistance to sea water corrosion.		
	Al-2052	NiCr-B	-150+53µm		Al-2081	Cu10Al5Ni1Fe	-125+45 µm
Deloro 55	Deloro 55 NiCrSiB surfacing powder 55HRC.				Al-2084	Cu10Al5Ni	-150+53µm
	Al-2055	-	-150+63µm	CuSn	Tin Bronze frequently used for solid bearings		
Deloro 60	Deloro 60 NiCrSiB powder 60HRC.				Al-2090	Cu12Sn2Ni	-150+53 µm
	Al-2062	NiCr-C	-150+45µm	IRON-BASED HARDFACING			
Col 84	Colmonoy 84 is a cost effective alternative to Stellite. Suitable for temps up to 815°C.			Rockit 102	Ferritic Hardfacing for abrasion resistant applications.		
	Al-2084C		-150+63µm		Al-20102		-150+53µm
Col 88	Colmonoy 88. 64HRC. Includes Cr and tungsten borides ad carbides. Combination of corrosion, high temperature and abrasion resistance.			Rockit 401	Iron-based martensitic Hardfacing for abrasion resistant applications. Suitable hardchrome replacement.		
	Al-2088	Ni17W17Cr4Si3B	-150+63µm		Al-20401		-150+53µm
625	Inconel 625 nickel-based powder.			Rockit 706	Iron-based abrasion and impact resistant powder. 66HRC.		
	Al-20625	NiCrMo-3	-150+53µm		Al-20706		-150+53µm
C276	Hastelloy C-276 provides superior corrosion resistance in oxidizing and reducing environments.			Vanadium Carbide	Extremely hard, abrasion resistant alternative to tungsten carbide. Ideal for high temperature fine particle abrasion.		
	Al-20276	NiCrMo-4	-125+45µm		Al-2077		-150+53 µm
Hast C	Hastelloy C – versatile corrosion resistance.			TUNGSTEN CARBIDE			
	Al-2096	NiCrMo-5	-150+63µm	60WC	Spherical/Crushed 60% Tungsten Carbide/Nickel Powder for applications requiring extreme abrasion resistance. Matrix hardness 60HRC, Carbide hardness 75-85HRC.		
Monel 400	Copper Nickel for welding Monel 400 alloys.				Al-2060		-150+45
	Al-20400	NiCu7	-150+53 µm				



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