

## COBALARC &amp; STOODY HARDFACING CONSUMABLES

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- ▲ Metal Enriched, Rutile Type Electrode.
- ▲ For Joining Dissimilar steels or as a Buffer Layer Prior to Hard Surfacing.
- ▲ Tough, Machinable Austenitic Stainless Steel Deposit.

3.2mm size can be used for vertical welding by depositing overlapping horizontal stringer passes.

### Classifications:

AS/NZS 2576: 1315-A4.  
W.T.I.A. Tech Note 4: 1315-A4.

### Description and Applications:

Cobalarc AUSTEX is a metal enriched, rutile type extruded electrode manufactured by CIGWELD. It produces a smooth arc action and higher deposition rates than conventional stainless steel electrodes.

Deposited weld metal has high strength and toughness in combination with excellent corrosion resistance and tolerance to dilution. Under heavy impact weld deposits will work harden.

Typical applications of Cobalarc AUSTEX include the joining of dissimilar steels, in particular austenitic manganese steels or stainless steels to mild steel and deposition as a buffer layer prior to hard surfacing.

The high tolerance to dilution makes Cobalarc AUSTEX ideal for crack repairs on high carbon steel components or manganese steel castings.

### Packaging and Operating Data:

AC (50 O.C.V.), DC+ or DC- polarity.

Electrode Size mm	Electrode Length mm	No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
3.2	380	20	105-140	5kg	15kg – 3 x 5kg	613973
4.0	380	13	140-180	5kg	15kg – 3 x 5kg	613974
5.0	450	7	170-210	5kg	15kg – 3 x 5kg	613975

### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

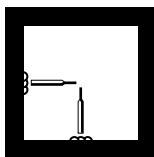
C: 0.10%	Mn: 1.50%	Si: 0.90%
Cr: 24.5%	Ni: 9.3%	

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV30
All Weld Metal Deposit	20	240
Work Hardened Deposit	40	400

### FINISHING RECOMMENDATIONS:

Machinable with Carbide Tools.



Downhand & Horizontal joining and build-up applications:-

3.2mm size can be used for vertical welding by depositing overlapping horizontal stringer passes.

## COBALARC MANGCRAFT

HV<sub>30</sub>  
42555  
OCVDC  
AC

- ▲ Austenitic Manganese Steel Electrode for Building Up & Reinforcing 11-14% Manganese Steel Components.
- ▲ Tough and Impact Resistant.
- ▲ Work Hardens Under Impact.

## Classifications:

AS/NZS 2576: 1215 - A4.

W.T.I.A. Tech Note 4: 1215 - A4.

## Description and Applications:

Cobalarc MANGCRAFT is a smooth running electrode depositing austenitic manganese steel weld metal. The deposits are extremely tough with high resistance to impact. They will work harden under impact loading giving added abrasion resistance.

Mangcraft is used for rebuilding austenitic manganese steel components either to finished dimensions or prior to applying an overlay of more abrasion resistant material.

Typical components include dredge bucket lips, swing hammers, grizzleys, bucket teeth, blow bars, crusher jaws, liners and concaves. Keep austenitic manganese steels cool during welding. Do not preheat. Use intermittent or staggered weld runs and water quench at frequent intervals if necessary.

## Packaging and Operating Data:

AC (55 O.C.V.), DC+ or DC- polarity.

Electrode Size mm	Electrode Length mm	No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
4.0	380	17	130-170	5kg	15kg - 3 x 5kg	611504
5.0	450	10	150-200	5kg	15kg - 3 x 5kg	611505

## TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.60% Mn: 12.0% Si: 0.10%

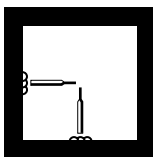
## TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
All Weld Metal Deposit	15	---
Work Hardened Deposit	43	425

## FINISHING RECOMMENDATIONS:

Machinable with Carbide Tools.

## COMPARABLE CIGWELD PRODUCTS:

Cobalarc Mang Nickel-O tubular wire  
AS/NZS 2576: 1215-B7Downhand & Horizontal  
build-up applications

- ▲ Metal Enriched, Rutile Type Electrode.
- ▲ For Re-building Worn Steel Components.
- ▲ Tough, Machinable Low Carbon Martensitic Steel Deposit.
- ▲ For the manual arc build-up and surfacing of steel gear, shafts, rails, shovel pads, track links, rolls and wheels etc.

3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.

### Classifications:

AS/NZS 2576: 1435-A4.

W.T.I.A. Tech Note 4: 1435-A4.

### Description and Applications:

Cobalarc 350 is a metal enriched, rutile type electrode recommended for the multi-layer build-up and surfacing of steel components subjected to metal-to-metal wear and compressive loading.

### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.07%	Mn: 0.85%	Si: 0.30%
Cr: 1.85%	Mo: 0.5%	

### TYPICAL WELD DEPOSIT HARDNESS:

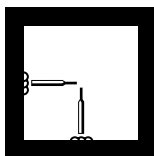
	HRC	HV30
Single Layer on Mild Steel	28	290
All Weld Metal Deposit	35	350

### FINISHING RECOMMENDATIONS:

Machinable.

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc 350-G, O tubular wire  
AS/NZS 2576: 1435-B5/B7



Downhand & Horizontal surfacing and build-up applications:-

3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.

Depositing a tough, air hardening low carbon martensitic steel weld deposit Cobalarc 350 is recommended for the manual arc build-up and surfacing of steel gears, shafts, rails, shovel pads, track links, rolls and wheels etc.

### Packaging and Operating Data:

AC (minimum 55 O.C.V.), DC+ or DC- polarity.

Electrode		No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
Size mm	Length mm					
3.2	380	25	100-150	5kg	15kg - 3 x 5kg	611443
3.2	380	25	100-150	1kg	12kg - 12 x 1kg	610443
4.0	380	16	140-200	5kg	15kg - 3 x 5kg	611444
4.0	380	16	140-200	1kg	12kg - 12 x 1kg	610444

## COBALARC 650

HV<sub>30</sub>  
64050  
O.C.V.DC  
AC

- ▲ Basic Type Manual Arc Welding Electrode.
- ▲ Resistant to Hard Particle Abrasion and Moderate Impact Loading.
- ▲ Air Hardening, Crack Free, Martensitic Steel Deposit - 650 HV<sub>30</sub>

## Classifications:

AS/NZS 2576:	1855-A4.
W.T.I.A. Tech Note 4:	1855-A4.

## Description and Applications:

Cobalarc 650 is a basic electrode for the hard surfacing of steel components subjected to wet or dry hard particle abrasion and low to moderate impact loading.

The air hardening, low alloy steel deposit of Cobalarc 650 remains crack free on most steels under normal welding conditions and is therefore recommended for hard surfacing components subject to flexing during service.

The basic flux coating gives excellent resistance to rust, mill scale, dirt and oil on the surface being hardfaced.

Typical applications include the surfacing of agricultural points, shares and tynes, grader and dozer blades, conveyor screws and post hole augers etc.

## Packaging and Operating Data:

AC (minimum 55 O.C.V.), DC+ or DC- polarity.

Size mm	Electrode		No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
	Length mm						
3.2	380		31	105-135	5kg	15kg - 3 x 5kg	611463
3.2	380		31	105-135	1kg	12kg - 12 x 1kg	610463
4.0	380		21	140-180	5kg	15kg - 3 x 5kg	611464
4.0	380		21	140-180	1kg	12kg - 12 x 1kg	610464

## TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.58%	Mn: 1.1%	Si: 0.6%
Cr: 5.3%	Mo: 0.25%	

## TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	57	640

## FINISHING RECOMMENDATIONS:

Not Machinable / Grinding only.

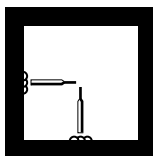
## COMPARABLE CIGWELD PRODUCTS:

Cobalarc 650-G tubular wire

AS/NZS 2576: 1855-B5/B7

Cobalarc 850-O tubular wire

AS/NZS 2576: 1865-B7



Downhand & Horizontal surfacing applications: -  
3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.

- ▲ Rutile type, AC/DC Hard Surfacing Electrode.
- ▲ Resistant to Hard Particle Abrasion.
- ▲ Air Hardening, Crack Free, Martensitic Steel Deposit - 750 HV<sub>30</sub>
- ▲ Easy Arc Starting and Stable Running on Portable AC Welding Sets ( ≥ 45 O.C.V. ).

### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.60%	Mn: 0.46%	Si: 0.75%
Cr: 5.9%	Mo: 0.40%	

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	64	800
Two Layers on Mild Steel*	62	750

\*Not recommended for multi-pass welding heavier than 3 layers

### FINISHING RECOMMENDATIONS:

Not Machinable / Grinding only.

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc 650 manual arc electrode  
AS/NZS 2576: 1855-A4

Cobalarc 650-G/O tubular wire  
AS/NZS 2576: 1855-B5/B7

Cobalarc 850-O tubular wire  
AS/NZS 2576: 1865-B7

### Classifications:

AS/NZS 2576:	1860-A4.
W.T.I.A. Tech Note 4:	1860-A4.

### Description and Applications:

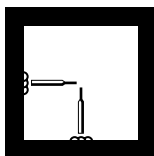
Cobalarc 750 is a NEW smooth running, rutile type electrode specifically designed for AC hard surfacing applications in the workshop or on the land.

It gives smooth stable arcing on AC or DC welding machines and is particularly suitable for surfacing with portable AC welding sets (with ≥ 45 Open Circuit Volts) such as the CIGWELD Easywelder.

Cobalarc 750 should be used with a touch welding or short arc technique and 1-2 layers are recommended for maximum deposit hardness.

When hard surfacing high carbon or low alloy steel components a buffer or buttering layer of Ferrocrafter 16TXP or Multicraft 7016 is recommended prior to depositing Cobalarc 750.

Typical applications include the surfacing of agricultural equipment and components including points, shares, post hole augers, ripper teeth and tynes etc.



Downhand & Horizontal hard surfacing applications:-  
3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.

### Packaging and Operating Data:

AC (minimum 45 O.C.V.), DC+ polarity.

Electrode		No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
Size mm	Length mm					
3.2	380	26	95-130	5kg	15kg – 3 x 5kg	611473
3.2	380	26	95-130	1kg	12kg – 12 x 1kg	610473
4.0	380	17	120-170	5kg	15kg – 3 x 5kg	611474
4.0	380	17	120-170	1kg	12kg – 12 x 1kg	610474

### Easyweld Blister Pack:

10 x 3.2mm rod Cobalarc 750 Blister Pack	322218
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- ▲ Versatile Manual Arc Welding Electrode.
- ▲ Secondary Hardening, Shock Resistant Properties.
- ▲ Crack Free Cr-Mo Steel Deposit for Repairing Blades, Dies, Punches etc.
- ▲ Also Suitable for General Hard Surfacing in Low Stress Abrasion Conditions.

3.2mm size can be used for vertical welding by depositing overlapping horizontal stringer passes.

#### Classifications:

AS/NZS 2576: 1560-A4.

W.T.I.A. Tech Note 4: 1560-A4.

#### Description and Applications:

Cobalarc Toolcraft is a versatile electrode for welding on mild, carbon and low alloy steels. The weld deposit has excellent abrasion / shock resistance and secondary hardness retention to 500°C.

The air hardening, low alloy Cr-Mo steel deposit of Cobalarc Toolcraft remains crack free on most steels under normal welding conditions and deposits can be ground to produce a long-lasting cutting edge.

Typical applications include the maintenance/repair of guillotine blades, cutting knives, punches, axes, lathe tools, chisels and debarking hammers. Cobalarc Toolcraft is also suitable for general hard surfacing applications under low stress abrasion conditions.

#### Deposit Annealing and Hardening:

Cobalarc Toolcraft deposits can be annealed by slow heating to 800°C, holding at temperature for one hour followed by furnace cooling.

For deposit re-hardening to ≈ 60 HR<sub>C</sub> preheat slowly to 800 - 850°C then rapidly to 1250 - 1300°C, hold at temperature for ≈ 10 minutes and then quench in oil. For full hardness, temper twice at 520 - 530°C for one hour.

#### Packaging and Operating Data:

AC (minimum 45 O.C.V.), DC+ polarity.

Electrode Size mm	Electrode Length mm	No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
3.2	380	28	90-125	5kg	15kg - 3 x 5kg	611523

#### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

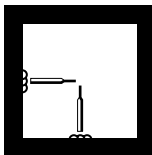
C: 0.58%	Mn: 0.10%	Si: 0.20%
Cr: 5.5%	Mo: 6.8%	

#### TYPICAL WELD DEPOSIT HARDNESS:

	HR <sub>C</sub>	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	60	700

#### FINISHING RECOMMENDATIONS:

Not Machinable / Grinding only.



Downhand & Horizontal surfacing applications:-  
3.2mm size can be used for vertical welding by depositing overlapping horizontal stringer passes.

- ▲ Highly Alloyed Manual Arc Electrode.
- ▲ High Chromium Carbide Iron Deposit.
- ▲ Primary Chromium Iron Carbides in a Single Layer.
- ▲ Ideal for Coarse Abrasion and Low to Moderate Impact Loading.
- ▲ Typical applications of Cobalarc CR70 include the hard surfacing of crusher cones and mantles, swing hammers, bucket teeth and lips, dozer end plates and sugar mill rolls etc.

3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.

### Classifications:

AS/NZS 2576: 2355-A4.  
W.T.I.A. Tech Note 4: 2355-A4.

### Description and Applications:

Cobalarc CR70 is a popular high alloy extruded hard surfacing electrode manufactured by CIGWELD. The weld deposit of Cobalarc CR70 produces a high level of primary chromium carbides resistant to coarse abrasion (in particular gouging abrasion) and moderate impact loading at temperatures up to  $\approx 650^{\circ}\text{C}$ .

Weld deposits can be finished by grinding and are best limited to two layers because of relief checking.

Typical applications of Cobalarc CR70 include the hard surfacing of crusher cones and mantles, swing hammers, bucket teeth and lips, dozer end plates and sugar mill rolls etc.

### Packaging and Operating Data:

AC (minimum 50 O.C.V.), DC+ polarity.

Electrode	No. of Electrodes	Current	Packet	Carton	Part No
Size mm	Length mm	Range (amps)			
3.2	380	90-140	5kg	15kg – 3 x 5kg	613493
4.0	380	130-200	5kg	15kg – 3 x 5kg	613494
5.0	450	180-250	5kg	15kg – 3 x 5kg	613495

### TYPICAL WELD DEPOSIT ANALYSIS:

Single Layer on Mild Steel:

C: 3.3% Mn: 1.5% Si: 1.0% Cr: 25%

All Weld Metal Deposit:

C: 4.0% Mn: 1.8% Si: 1.2% Cr: 31%

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	59	690

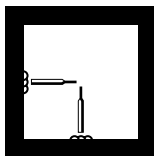
Deposits contain Chromium Carbides with hardness up to 1,500 HV.

### FINISHING RECOMMENDATIONS:

Grinding only.

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc COARSECLAD-G/O tubular wire  
AS/NZS 2576: 2360-B5/B7



Downhand & Horizontal surfacing applications:-  
3.2mm and 4.0mm sizes can be used for vertical welding by depositing overlapping horizontal stringer passes.



## COBALARC BOROCHROME

HV<sub>30</sub>  
70050  
OCVAC  
DC+

- ▲ Highly Alloyed Manual Arc Electrode.
- ▲ Martensitic Chromium Carbide Iron Deposit.
- ▲ Ideal for Fine Particle (Wet or Dry) Abrasion and Low Impact Loading.
- ▲ Primary Chromium Iron Carbides in a Hard, Martensitic Matrix.

## Classifications:

AS/NZS 2576: 2560-A4.  
W.T.I.A. Tech Note 4: 2560-A4.

## Description and Applications:

Cobalarc BOROCHROME is a popular high alloy extruded hardsurfacing electrode manufactured by CIGWELD. The addition of nominally 1% Boron to Cobalarc BOROCHROME produces an ultra fine, martensitic matrix in the weld deposit particularly resistant to wet or dry abrasive or erosive media.

Weld deposits can be finished by grinding and are best limited to two layers because of relief checking. Typical applications of Cobalarc BOROCHROME include the hard surfacing of sand chutes, dredge components, ripper shanks, screens, grizzly bars, scraper blades and bucket lips and teeth.

## TYPICAL WELD DEPOSIT ANALYSIS:

Single Layer on Mild Steel:

C: 2.7%	Mn: 0.4%	Si: 1.8%
Cr: 20.0%	V: 1.4%	B: 1.0%

All Weld Metal Deposit:

C: 3.2%	Mn: 0.4%	Si: 2.4%
Cr: 24.0%	V: 1.7%	B: 1.2%

## TYPICAL WELD DEPOSIT HARDNESS:

	HRc	HV <sub>30</sub>
Single Layer on Mild Steel	58	660
All Weld Metal Deposit	60	700

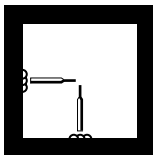
Deposits contain Chromium Carbides with hardness up to 1,500 HV.

## FINISHING RECOMMENDATIONS:

Grinding only.

## COMPARABLE CIGWELD PRODUCTS:

Cobalarc FINECLAD-O tubular wire  
AS/NZS 2576: 2565-B7



Downhand & Horizontal  
surfacing applications

## Packaging and Operating Data:

AC (minimum 50 O.C.V.), DC+ polarity.

Electrode Size mm	Electrode Length mm	No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
4.0	380	11	140-180	5kg	15kg – 3 x 5kg	613964
5.0	450	6	170-210	5kg	15kg – 3 x 5kg	613965

- ▲ Highly Alloyed Tubular Electrode.
- ▲ Partially Dissolved Tungsten Carbides bonded in an Iron Rich Matrix.
- ▲ Resistant to Extreme Abrasion and Low Impact Loading.
- ▲ Typical applications include the hard surfacing of fan and pump impellers, pug mill augers and knives, and gravel chutes, feed screws, ripper tyres and scraper/mixer blades.

6.3mm Cobalarc 4 can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

### Classifications:

AS/NZS 2576:	3460-A1.
W.T.I.A. Tech Note 4:	3460-A1.

### Description and Applications:

Cobalarc 4 is a tubular hard surfacing electrode manufactured by CIGWELD which deposits a highly wear resistant weld metal consisting of very hard partially dissolved tungsten carbides in an iron rich matrix.

Cobalarc 4 should not be used in applications involving heavy impact or shock loading.

Typical applications of Cobalarc 4 include the hard surfacing of fan and pump impellers, pug mill augers and knives, sand and gravel chutes, feed screws, ripper tyres and scraper / mixer blades.

### Packaging and Operating Data:

AC (minimum 50 O.C.V.), DC+ polarity.

Electrode		No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
Size mm	Length mm					
6.3	450	9	80-150	5kg	15kg - 3 x 5kg	613255

### TYPICAL WELD DEPOSIT ANALYSIS\*:

Single Layer on Mild Steel:

C: 3.1%      Mn: 0.9%      W: 44%      Cr: 6%

All Weld Metal Deposit:

C: 3.7%      Mn: 1.0%      W: 53%      Cr: 7%

### TYPICAL WELD DEPOSIT HARDNESS:

	HRc	HV <sub>30</sub>
Single Layer on Mild Steel	62	750
All Weld Metal Deposit	64	800

Deposits contain Tungsten Carbides with hardness up to 2,200 HV.

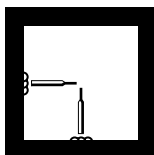
\* Actual weld deposit consists of undissolved Tungsten Carbide particles in a eutectic matrix of C-W-Cr-Fe. The analysis of the matrix will vary with the proportion of Tungsten Carbides dissolved during welding.

### FINISHING RECOMMENDATIONS:

Grinding only.

### IDENTIFICATION COLOURS:

Purple (Single dot near holder end)



Downhand & Horizontal surfacing applications:-

6.3mm Cobalarc 4 can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

## COBALARC 9

HV<sub>30</sub>  
780

50  
OCV

AC  
DC+

- ▲ Highly Alloyed Tubular Electrode.
- ▲ Versatile, Complex Carbide Iron Deposit.
- ▲ Resistant to both Coarse and Fine Abrasion and Moderate to Heavy Impact Loading.
- ▲ Typical applications include the hard surfacing of railway ballast tampers, dredge buckets and lips, earth moving equipment, power shovels, rolling mill guides, sizing screens, ripper teeth and crushing equipment.

5.0mm and 6.3mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

### Classifications:

AS/NZS 2576: 2460-A1.  
W.T.I.A. Tech Note 4: 2460-A1.

### Description and Applications:

Cobalarc 9 is the most versatile tubular hard surfacing electrode in the CIGWELD range.

The complex chromium rich carbides in Cobalarc 9 make it highly resistant to both coarse and fine abrasion while retaining the toughness to withstand moderate to heavy impact.

Typical applications of Cobalarc 9 include the hard surfacing of railway ballast tampers, dredge buckets and lips, earth moving equipment, power shovels, rolling mill guides, sizing screens, ripper teeth and crushing equipment.

### Packaging and Operating Data:

AC (minimum 50 O.C.V.), DC+ polarity.

Electrode Size mm	Length mm	No. of Electrodes per kg.	Current Range (amps)	Packet	Carton	Part No
5.0	450	20	60-120	5kg	15kg - 3 x 5kg	613350
6.3	450	14	70-150	5kg	15kg - 3 x 5kg	613360

### TYPICAL WELD DEPOSIT ANALYSIS:

Single Layer on Mild Steel:

C: 4.0%	Mn: 0.9%	Si: 1.1%	Cr: 25.0%
Ni: 0.4%	Mo: 1.5%	V: 0.2%	

All Weld Metal Deposit:

C: 4.8%	Mn: 1.1%	Si: 1.4%	Cr: 30.0%
Ni: 0.5%	Mo: 1.7%	V: 0.2%	

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	58	660
All Weld Metal Deposit	63	780

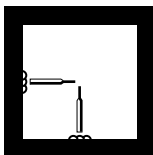
Deposits contain complex Chromium Carbides with hardness up to 1,500 HV.

### FINISHING RECOMMENDATIONS:

Grinding only.

### IDENTIFICATION COLOURS:

White (Single dot near holder end)



Downhand & Horizontal surfacing applications:-

5.0mm and 6.3mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

# We've taken the "HARD" out of Hardfacing



**STOODY - "The Leader in Hardfacing"**

## STOODY DYNAMANG-O



(Replaces Cobalarc Mang Nickel-O)

- ▲ Self Shielded (-O), Tubular Hardfacing Wire.
- ▲ Tough, Work Hardening Austenitic Manganese Steel Deposit.
- ▲ Typical applications include the repair of Manganese steel crusher rolls, jaw and hammer crushers, gyratory mantles, blow bars and dredge pump cutters etc.
- ▲ 1.6mm size can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

**Classifications:**

AS/NZS 2576: 1215-B7.  
W.T.I.A. Tech Note 4: 1215-B7.

**Description and Applications:**

Stoody Dynamang-O is a high alloy tubular wire depositing a manganese steel weld metal for the repair and joining of matching Manganese steel components used in the quarrying and mining industries.

Resultant weld deposits have high strength and elongation and are extremely resistant to impact loading. Stoody Dynamang-O can be multi-layered to any thickness without relief checking and deposits will work harden during service under high impact loading.

Typical applications include the repair of Manganese steel crusher rolls, jaw and hammer crushers, gyratory mantles, blow bars and dredge pump cutters etc.

**Packaging and Operating Data:**

DC Electrode Positive.

Wire Dia. mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout mm	Pack Type	Pack Weight	Part No
1.6	200-250	23-27	12-25	Spool	15kg	11446700
2.8	275-375	25-28	20-45	Coil	27kg	11249900

**TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:**

C: 0.90% Mn: 13.40% Si: 0.37%  
Ni: 2.7% Cr: 2.50%

**TYPICAL WELD DEPOSIT PROPERTIES:**

Yield Stress 615 MPa  
Tensile Strength 810 MPa  
Elongation 21%

**TYPICAL WELD DEPOSIT HARDNESS:**

	HR <sub>C</sub>	HV <sub>30</sub>
All Weld Metal Deposit	17	220
Work Hardened	42	410

**FINISHING RECOMMENDATIONS:**

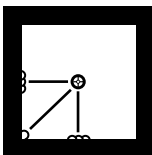
Machinable as Deposited.

**RECOMMENDED SHIELDING GAS:**

- Open arc or welding grade CO<sub>2</sub>

**COMPARABLE CIGWELD PRODUCTS:**

Cobalarc Mangcraft extruded electrode  
AS/NZS 2576: 1215-A4



Downhand & Horizontal surfacing applications:-

1.6mm size can be used for vertical surfacing by depositing overlapping horizontal stringer passes.



(Replaces Cobalarc 350-G/O)

- ▲ Gas (-G) and Self Shielded (-O), Tubular Hardfacing Wires.
- ▲ Tough, Machinable Low Carbon Martensitic Steel Deposit.
- ▲ Recommended for the build-up and surfacing of steel track rolls, idler wheels, track pads, drive sprockets, pins, links and other components subject to abrasion and/or metal-to-metal wear.
- ▲ 1.2mm and 1.6mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.
- ▲ 1.2mm and 1.6mm wires are B5 type wires which require a shielding gas. 2.4mm size is a B7 type open arc wire which requires no shielding gas.

### Classifications:

	1.2mm & 1.6mm	2.4mm*
AS/NZS 2576:	1435-B5	1435-B7.
W.T.I.A. Tech Note 4:	1435-B5	1435-B7.

\* - 1.2mm and 1.6mm Stody Super Buildup-G wires are B5 type wires which require a shielding gas. 2.4mm Stody Super Buildup-O is a B7 type open arc wire which requires no shielding gas.

### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.20%	Mn: 1.5%	Si: 0.4%
Cr: 2.0%	Mo: 0.5%	Fe: balance

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	30	300
All Weld Metal Deposit	40	390

### FINISHING RECOMMENDATIONS:

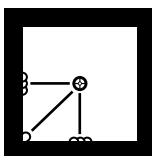
Machinable. Carbide tools recommended.

### RECOMMENDED SHIELDING GASES:

- 1.2mm & 1.6mm Super buildup-G
  - Ar + 1-3% O<sub>2</sub>
  - Ar + 10-25% CO<sub>2</sub> or equivalent
- 2.4mm Super Buildup-O
  - Open arc or welding grade CO<sub>2</sub>

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc 350 extruded electrode  
AS/NZS 2576: 1435-A4



Downhand & Horizontal build-up applications:-  
1.2mm and 1.6mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

### Description and Applications:

Stody Super Buildup-G/O is a tubular hard surfacing wire designed for the re-building or surfacing of steel components subjected to metal-to-metal wear and compressive loading.

1.2mm Stody Super Buildup-G/O is ideal for all positional surfacing applications with Transmig 250 and 275 power plants.

Depositing a tough, air hardening low carbon martensitic steel weld deposit, Stody Super Buildup-G/O is recommended for the semi-automatic build-up and surfacing of steel track rolls, idler wheels, track pads, drive sprockets, pins, links and other components subjected to abrasion and/or metal-to-metal wear.

### Packaging and Operating Data:

DC Electrode Positive.

Wire Dia. mm	Current Range (amps)	Voltage Range (volts)	Recommended Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.2	120-220	18-24	15-20	Spool	15kg	11423600
1.6	140-250	23-26	15-25	Spool	15kg	11946200
2.4	200-350	24-28	20-30	Coil	27kg	11183600

## STOODY 965-G/O



(Replaces Cobalarc 650-G/O)

- ▲ Gas (-G) and Self Shielded (-O), Tubular Hardfacing Wires.
- ▲ Air Hardening, Crack Free, Martensitic Steel Deposit.
- ▲ Resistant to Hard Particle Abrasion and Moderate Impact Loading.
- ▲ Typical applications include the surfacing of agricultural points, shares and tynes, sand dredge cutter heads, dredge rollers and tumblers, conveyor screws, bucket lips, etc.
- ▲ 1.2mm and 1.6mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.
- ▲ 1.2mm and 1.6mm wires are B5 type wires which require a shielding gas. 2.4mm size is a B7 type open arc wire which requires no shielding gas.

**Classifications:**

1.2mm & 1.6mm	2.4mm*
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AS/NZS 2576:	1855-B5	1855-B7.
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W.T.I.A. Tech Note 4:	1855-B5	1855-B7.
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\* - 1.2mm and 1.6mm Stody 965-G wires are B5 type wires which require a shielding gas. 2.4mm Stody 965-O is a B7 type open arc wire which requires no shielding gas.

**Description and Applications:**

Stody 965-G/O is a tubular hard surfacing wire for surfacing components subjected to wet or dry hard particle abrasion and low to moderate impact loading. The air hardening martensitic steel weld deposit of Stody 965-G/O remains crack free on most steels under normal welding conditions and is therefore recommended for the surfacing of components subject to flexing during service. 1.2mm Stody 965-G/O is ideal for all positional surfacing applications with the Transmig 210, 250 and 310 power sources.

Typical applications include the surfacing of agricultural points, shares and tynes, sand dredge cutter heads, dredge rollers and tumblers, conveyor screws, bucket lips, etc.

**Packaging and Operating Data:**

DC Electrode Positive.

Wire Dia mm	Current Range (amps)	Voltage Range (volts)	Recommended Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.2	120-220	18-24	15-20	Spool	15kg	11423100
1.6	140-250	23-26	20-25	Spool	15kg	11501500
1.6	140-250	23-26	20-25	Handispool	4kg	11945700
2.4	200-350	24-28	20-30	Coil	27kg	11946100

**TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:**

C: 0.60%	Mn: 1.70%	Si: 1.40%
Cr: 6.20%	Fe: balance	

**TYPICAL WELD DEPOSIT HARDNESS:**

	HR <sub>C</sub>	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	60	700

**FINISHING RECOMMENDATIONS:**

Not Machinable. Grinding only.

**RECOMMENDED SHIELDING GASES:**

1.2mm & 1.6mm 965-G

- Ar + 1-3% O<sub>2</sub> or equivalent

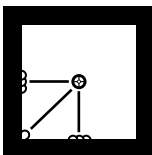
2.4mm 965-O

- Open arc or welding grade CO<sub>2</sub>

**COMPARABLE CIGWELD PRODUCTS:**

Cobalarc 650 extruded electrode

AS/NZS 2576: 1855-A4



Downhand & Horizontal build-up applications:-

1.2mm and 1.6mm sizes can be used for vertical surfacing by depositing overlapping horizontal stringer passes.



- ▲ Self Shielded (-O), Tubular Hardfacing Wire.
- ▲ Air Hardening, Crack Prone High Carbon, Martensitic Steel Deposit.
- ▲ Resistant to Severe Abrasion and Low Impact Loading.
- ▲ Typical applications include the hard surfacing of agricultural, mining and materials handling equipment including tynes, points, conveyor screws, dredge buckets, cane harvester cutters/elevators and sugar mill scraper plates.
- ▲ 1.2mm size can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

#### Classifications:

AS/NZS 2576:	1865-B7.
W.T.I.A. Tech Note 4:	1865-B7.

#### TYPICAL ALL WELD METAL DEPOSIT ANALYSIS:

C: 0.95%	Mn: 0.6%	Si: 0.9%
Cr: 6.5%	Mo: 3.5%	B: 1.5%

#### TYPICAL WELD DEPOSIT HARDNESS:

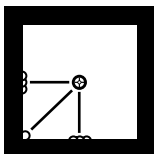
	HR <sub>C</sub>	HV <sub>30</sub>
Single Layer on Mild Steel	62	750
All Weld Metal Deposit	65	830

#### FINISHING RECOMMENDATIONS:

Grinding only.

#### RECOMMENDED SHIELDING GAS:

- Open arc or welding grade CO<sub>2</sub>
- EN439: C1



Downhand & Horizontal surfacing applications:-  
1.2mm size can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

#### Description and Applications:

Stoody 850 is a self shielded (or open arc) hard surfacing wire which deposits a high carbon martensitic steel for excellent resistance to severe, fine (wet or dry) abrasion and low impact loading.

Weld deposits are air hardening and prone to fine relief checking. Stoody 850 should not be used in applications involving heavy impact or shock loading.

1.2mm Stoody 850 is ideal for all positional surfacing applications with the Transmig 250 and 275 power plant.

Typical applications include the hard surfacing of agricultural, mining and materials handling equipment including tynes, points, conveyor screws, dredge buckets, cane harvester cutters / elevators and sugar mill scraper plates.

#### Packaging and Operating Data:

DC Electrode Positive

Wire Dia mm	Current Range (amps)	Voltage Range (volts)	Recommended Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.2	120-220	18-24	15-20	Spool	15kg	11945500



## STOODY 101 HC-G/O



(Replaces Cobalarc Coarseclad-G/O 1.2 & 1.6mm)

- ▲ High Alloy, Tubular Hardfacing Wire.
- ▲ High Chromium - Carbide Iron Deposit. For Ground Engaging Applications.
- ▲ Resistant to Severe Abrasion and Low to Moderate Impact Loading.
- ▲ Typical applications include the hard surfacing of crusher cones and mantles, swing hammers, earthmoving buckets, scarifier points and sugar harvesting and milling equipment.
- ▲ 1.2mm size is suitable for vertical-up surfacing using a wide weaving technique.

**Classifications:**

	1.2mm*	1.6mm*
AS/NZS 2576:	2360-B5	2360-B7.
W.T.I.A. Tech Note 4:	2360-B5	2360-B7.

\* 1.2mm 101 HC-G is a B5 type wire which requires a shielding gas.  
1.6mm 101 HC-O is a B7 type wire which requires no shielding gas.

**Description and Applications:**

Stoody 101 HC-G/O is a high alloy tubular hardfacing wire depositing a high chromium carbide iron particularly resistant to severe coarse (large particle) abrasion. The weld deposit of Stoody 101 HC-G/O produces a high level of primary chromium carbides resistant to coarse abrasion (in particular gouging abrasion) at temperatures up to 650°C.

Weld deposits can be finished by grinding and relief checking is normal. Typical applications of Stoody 101 HC-G/O include the hard surfacing of crusher cones and mantles, swing hammers, earthmoving buckets, scarifier points and sugar harvesting and milling equipment. For high impact applications Stoody 101 HC-G/O deposits should be restricted to one layer.

**Weld Deposit Microstructure:**

Two layers of Stoody 101 HC-G/O onto a mild steel component will produce approximately 25 - 30% primary chromium iron carbides in a carbide-ferrite matrix ideal for severe abrasion and low to moderate impact applications.

**Packaging and Operating Data:**

DC Electrode Positive.

Wire Dia mm	Current Range (amps)	Voltage Range (volts)	Recommended Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.2 Coarseclad-G	150-200	22-26	12-20	Spool	15kg	11436300
1.6 Coarseclad-O	200-260	24-28	15-25	Spool	15kg	11304700
				Handispool	4kg	11945600

**TYPICAL WELD DEPOSIT ANALYSIS:**

Single Layer on Mild Steel:

C: 4.0% Mn: 0.7% Si: 0.7% Cr: 14.0%

All Weld Metal Deposit:

C: 5.2% Mn: 0.7% Si: 0.7% Cr: 19.0%

**TYPICAL WELD DEPOSIT HARDNESS:**

	HR <sub>C</sub>	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	60	700

Deposits contain Chromium Carbides with hardness up to 1,500 HV (80 HR<sub>C</sub>).

**FINISHING RECOMMENDATIONS:**

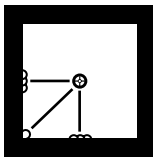
Grinding only.

**RECOMMENDED SHIELDING GAS:**

- 1.2mm 101 HC-G
- Ar+ 1-3% O<sub>2</sub> or equivalent
- 1.6mm 101 HC-O
- Open arc or welding grade CO<sub>2</sub>

**COMPARABLE CIGWELD PRODUCTS:**

Cobalarc CR70 extruded electrode  
AS/NZS 2576: 2355-A4



Downhand & Horizontal surfacing applications:-

1.2mm size is suitable for vertical-up surfacing using a wide weaving technique.



(Replaces Cobalarc Coarseclad-O 2.4 & 2.8mm)

- ▲ Self Shielded (-O), Tubular Hardfacing Wire.
- ▲ High Chromium Carbide Iron Deposit.
- ▲ For Ground Engaging Applications.
- ▲ Resistant to Coarse Abrasion and Low to Moderate Impact Loading.
- ▲ Primary Chromium Iron Carbides in Single Layer.

### Classifications:

AS/NZS 2576: 2360-B7.  
W.T.I.A. Tech Note 4: 2360-B7.

### Description and Applications:

Stoody 100 HC-O is a high alloy tubular hardfacing wire depositing a high chromium carbide iron particularly resistant to coarse (large particle) abrasion. The weld deposit of Stoody 100 HC-O produces a high level of primary chromium carbides resistant to coarse abrasion (in particular gouging abrasion) at temperatures up to 650°C.

Weld deposits can be finished by grinding and relief checking is normal. Typical applications of Stoody 100 HC-O include the hard surfacing of crusher cones and mantles, swing hammers, earthmoving buckets, blades and rippers. Also suitable for single layer wear plate manufacture.

For higher impact applications Stoody 100 HC-O deposits should be restricted to two layers.

### Weld Deposit Microstructure:

Two layers of Stoody 100 HC-O onto a mild steel component will produce approximately 30% - 35% primary chromium iron carbides in a carbide-ferrite matrix ideal for coarse abrasion and low to moderate impact applications.

### Packaging and Operating Data:

DC Electrode Positive.

Wire Diameter mm	Current Range (amps)	Voltage Range (volts)	Recommended Stickout (ESO) mm	Pack Type	Pack Weight	Part No
2.4	250-350	25-30	35-55	Coil	27kg	11313400
2.8	300-450	27-33	35-55	Coil	27kg	11001000
2.8	300-450	27-33	35-55	POP*	226kg	11235400

\* Pay-off Pack or Drum

### TYPICAL WELD DEPOSIT ANALYSIS:

Single Layer on Mild Steel:

C: 4.0% Mn: 1.0% Si: 1.0% Cr: 20% Mo: 0.7%

All Weld Metal Deposit:

C: 4.5% Mn: 1.5% Si: 1.5% Cr: 25% Mo: 1%

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Single Layer on Mild Steel	55	600
All Weld Metal Deposit	63	780

Deposits contain Chromium Carbides with hardness up to 1,500 HV (80 HRC).

### FINISHING RECOMMENDATIONS:

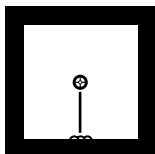
Grinding only.

### RECOMMENDED SHIELDING GAS:

- Open arc or welding grade CO<sub>2</sub>
- EN439: C1

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc CR70 extruded electrode  
AS/NZS 2576: 2355-A4



Downhand surfacing applications

## STOODY FINECLAD-O



(Replaces Cobalarc Fineclad-O)

- ▲ Self Shielded (-O), Tubular Hardfacing Wire.
- ▲ Chromium Iron Carbides in a Hard, Martensitic Matrix.
- ▲ Resistant to Fine, Wet or Dry Abrasion
- ▲ High Deposit Hardness - typically 65 HRC.
- ▲ Now available in 1.6mm size on 15kg spools.

**Classifications:**

AS/NZS 2576: 2565-B7.  
W.T.I.A. Tech Note 4: 2565-B7.

**Description and Applications:**

Stoody FINECLAD-O is a second generation Cobalarc tubular wire depositing a hard martensitic chromium carbide iron resistant to severe fine abrasion. The addition of nominally 0.8% Boron to Stoody FINECLAD-O produces an ultra fine, martensitic matrix in the weld deposit particularly resistant to wet or dry abrasive or erosive media.

Stoody FINECLAD-O also gives satisfactory performance under medium to coarse abrasion however this is limited to conditions of low impact loading. Weld deposits can be finished by grinding and relief checking is normal.

Typical applications of Stoody FINECLAD-O include the surfacing of sand chutes, dredge components, ripper shanks, screens, grizzly bars, scraper blades, and bucket teeth and lips etc.

**Weld Deposit Microstructure:**

The addition of nominally 0.8% Boron to Stoody FINECLAD-O facilitates the formation of martensite in the eutectic. It also results in an ultra fine eutectic structure which in combination with the martensite fraction is responsible for Stoody FINECLAD-O's excellent resistance to fine wet/dry abrasion and erosion.

**Packaging and Operating Data:**

DC Electrode Positive.

Wire Diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout mm	Pack Type	Pack Weight	Part No
1.6	200-260	24-28	15-25	Spool	27kg	11945800
2.4	250-350	25-30	35-55	Coil	27kg	11945900

**TYPICAL WELD DEPOSIT ANALYSIS:**

Single Layer on Mild Steel:

C: 3.5% Mn: 0.3% Si: 0.4%

Cr: 14% B: 0.5%

All Weld Metal Deposit:

C: 4.8% Mn: 0.5% Si: 0.6%

Cr: 20% B: 0.75%

**TYPICAL WELD DEPOSIT HARDNESS:**

	HRC	HV30
Single Layer on Mild Steel	62	750
All Weld Metal Deposit	65	830

Deposits contain Chromium Carbides with hardness up to 1,500 HV (80 HRC).

**FINISHING RECOMMENDATIONS:**

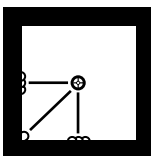
Grinding only.

**RECOMMENDED SHIELDING GAS:**

- Open arc or welding grade CO<sub>2</sub>
- EN439: C1

**COMPARABLE CIGWELD PRODUCTS:**

Cobalarc Borochrome extruded electrode  
AS/NZS 2576: 2560-A4



Downhand & Horizontal surfacing applications:-

1.6mm size can be used for vertical surfacing by depositing overlapping horizontal stringer passes.

## STOODY 110 MC




(Replaces Cobalarc Crome Mang-O)

- ▲ Self shielded (-0) tubular hardfacing wire.
- ▲ Tough, work hardening high manganese/ high chromium stainless steel deposits.
- ▲ Repair, joining and surfacing of manganese steel components.
- ▲ Suitable for heavy build-up applications.

### Classifications:

AS/NZS 2576: 1715-B7.  
W.T.I.A. Tech Note 4: 1715-B7.

### Description and Applications:

Stoody 110 MC is an open arc tubular wire depositing a high manganese and high chromium stainless steel weld metal for the repair, joining or surfacing of manganese steel components extensively used in the quarrying and mining industry.

Resultant weld deposits have high strength and toughness, good resistance to cavitation and corrosion and are extremely resistant to impact loading. Stoody 110 MC can be multi-layered to any thickness without relief checking and deposits will work harden during service under high impact loading.

Typical applications include the repair of manganese steel crusher rolls, jaw and hammer crushers, gyratory mantles, manganese frogs, drive tumblers and dredge pump cutters etc.

### Packaging and Operating Data:

DC Electrode Positive

Electrode Size	Current Range (amps)	Voltage Range (volts)	Electrode Stickout mm	Pack Type	Pack Weight	Part No
2.8mm	200-375	25-28	20-35mm	Coil	27kg	11836900

### TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 0.30%	Mn: 14.7%	Si: 0.37%
Cr: 16.8%	Ni: 0.65%	Fe: Balance

### TYPICAL WELD DEPOSIT PROPERTIES:

Yield Strength	520 MPa
Tensile Strength	820 MPa
Elongation	40%

### TYPICAL WELD DEPOSIT HARDNESS:

	HR <sub>C</sub>	HV <sub>30</sub>
All Weld Metal Deposit	17	220
Work Hardened	55	600

### FINISHING RECOMMENDATIONS:

Machinable-as deposited

### RECOMMENDED SHIELDING GASES:

- Open Arc or Welding Grade CO<sub>2</sub>

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc Mangcraft Extruded Electrode  
AS/NZS 2576:1215-A4  
Stoody Dynamang-O Open Arc Wire  
AS/NZS 2576:1215-B7

## STOODY 104

HV<sub>30</sub>  
400AC  
DC

(Replaces Cobalarc 104-SA)

- ▲ Submerged arc (-SA) tubular build-up wire.
- ▲ Tough, machinable, low carbon pearlitic steel deposit.
- ▲ Resistant to high compressive loading.
- ▲ For the unlimited build-up of worn steel components.

## Classifications:

AS/NZS 2576: 1125-B1.

W.T.I.A.Tech Note 4: 1125-B1.

## Description and Applications:

Stoody 104 is a low alloy steel submerged arc tubular wire developed for the rebuilding of steel components subjected to high compressive loading and plastic deformation. Producing weld metal with excellent machinability in the 'as welded' condition, when used with Stoody S flux, Stoody 104 can be multi-layered and readily hot forged. Typical applications of Stoody 104/Stoody S flux include the submerged arc build-up of steel rolls, wheels, sprockets, shafts and track links etc.

## TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 0.07% Mn: 2.90% Si: 1.25%  
Cr: 1.15% Fe: bal

## TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
All weld metal deposit	29	290

## FINISHING RECOMMENDATIONS:

Machinable.

## RECOMMENDED SHIELDING GASES:

Stoody S

## DEPOSIT CHARACTERISTICS:

Abrasion resistance	Low
Impact resistance	Excellent
Compressive strength	Excellent
Hardness	29 HRC
Surface cross checks	No
Magnetic	Yes
Deposit Layers	Unlimited
Machinability	Yes

## COMPARABLE CIGWELD PRODUCTS:

Cobalarc 250 extruded electrode

AS/NZS 2576:1120-A4

Stoody Build Up-O self shielded tubular wire

AS/NZS 2576:1125-B7

## Packaging and Operating Data:

AC, DC electrode positive or negative

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
3.2	350-400	28-30	25-35	Half Pack	90kg	11040900
3.2	350-400	26-30	25-35	Pay-off Pack	226kg	11039500

## STOODY 105

HV<sub>30</sub>  
400AC  
DC

(Replaces Cobalarc 105-SA)

- ▲ Submerged arc tubular build-up wire.
- ▲ Tough, machinable, crack-free steel deposit.
- ▲ Resistant to high compressive loading.
- ▲ Ideal as an underbase prior to hardfacing.
- ▲ For re-building worn steel components.

### Classifications:

AS/NZS 2576: 1445-B1.  
W.T.I.A.Tech Note 4: 1445-B1.

### Description and Applications:

Stoody 105 is a submerged arc wire with very good resistance to abrasion in metal-to-metal wear. Multiple layer crack-free steel deposits can be obtained. When more than 3 layers are required, an underbase of Stoody 105 is recommended. Tungsten carbide tools and rigid, well powered equipment are required for machining. Deposits are difficult to flame cut. Applications include the rebuilding of: rollers, idlers, mine car wheels, arch wheels and charging car wheels.

### TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 0.2%	Mn: 2.0%	Si: 1.3%
Cr: 2.8%	Mo: 0.4% V: 0.15%	Fe: bal

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
3 layers maximum on Mild Steel	45	440

### FINISHING RECOMMENDATIONS:

Machinable with difficulty.

### RECOMMENDED SHIELDING GASES:

Stoody S

### DEPOSIT CHARACTERISTICS:

Abrasion resistance	Very good
Impact resistance	Good
Compressive strength	Good
Hardness	45HRC
Surface cross checks	No
Magnetic	Yes
Deposit Layers	Three
Machinability	With difficulty

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc 350 extruded electrode  
AS/NZS 2576:1435-A4  
Stoody Super Build Up-G/O  
AS/NZS 2576:1435-B5/B7

### Packaging and Operating Data:

AC, DC electrode positive or negative.

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
3.2	350-400	28-30	25-35	Half Pack	90kg	11041000
3.2	350-400	26-30	25-35	Pay-off Pack	226kg	11039600

## STOODY 107

HV<sub>30</sub>  
400AC  
DC

(Replaces Cobalarc 107-SA)

- ▲ Submerged arc tubular build-up wire.
- ▲ Tough, machinable, crack-free steel deposit.
- ▲ Resistant to high compressive loading.
- ▲ Ideal as an underbase prior to hardfacing.
- ▲ For re-building worn steel components.

## Classifications:

AS/NZS 2576: 1440-B1.  
W.T.I.A.Tech Note 4: 1440-B1.

## Description and Applications:

Stoody 107 is a submerged arc wire with good resistance to metal-to-metal wear, excellent impact resistance, good compressive strength and resistance to plastic deformation. Multiple layer crack-free deposits can be obtained up to 20mm thick. Deposits are readily machinable with carbide tools and can be flame cut. Stoody 107 can be used for both the build-up and hardfacing of rollers and idlers. Applications include the rebuilding of rollers, idlers, carbon steel crane wheels, mine car wheels and house rollers.

## TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 0.14% Mn: 1.9% Si: 0.8%  
Cr: 2.2% Mo: 0.3% Fe: bal

## TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV <sub>30</sub>
Multiple Layer on Mild Steel	38	380

## FINISHING RECOMMENDATIONS:

Machinable.

## RECOMMENDED SHIELDING GASES:

Stoody S

## DEPOSIT CHARACTERISTICS:

Abrasion resistance	Good
Impact resistance	Excellent
Compressive strength	Good
Hardness	38 HRC
Surface cross checks	No
Magnetic	Yes
Deposit thickness	up to 20mm
Machinability	Yes

## COMPARABLE CIGWELD PRODUCTS:

Cobalarc 350 extruded electrode  
AS/NZS 2576:1435-A4  
Stoody Super Build Up-G/O  
AS/NZS 2576:1435-B5/B7

## Packaging and Operating Data:

AC, DC electrode positive or negative.

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
3.2	350-400	28-30	25-35	Half Pack	90kg	11041200
3.2	350-400	26-30	25-35	Pay-off Pack	226kg	11039800

(Replaces Cobalarc 250-O)

- ▲ Self shielded (-O), tubular build-up wire.
- ▲ Tough, machinable low carbon pearlitic steel deposit.
- ▲ Resistant to high compressive loading.
- ▲ Ideal as an underbase prior to hardfacing.
- ▲ For re-building worn steel components.

### Classifications:

AS/NZS 2576: 1125-B7.  
W.T.I.A. Tech Note 4: 1125-B7.

### Description and Applications:

Stoody Buildup-O is an open arc tubular wire developed for the re-building of steel components subjected to high compressive loading and plastic deformation.

Producing excellent machinability in the 'as welded' condition, weld deposits of Stoody Buildup-O can be multi-layered and readily hot forged.

Typical applications of Stoody Buildup-O include the semi or fully automatic build-up of steel rolls, wheels, sprockets, shafts and track links.

### Packaging and Operating Data:

DC electrode positive.

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
2.8	300-450	26-30	20-35	Coil	22kg	11000100
2.8	300-450	26-30	20-35	Half Pack	90kg	11813100
2.8	300-450	26-30	20-35	Pay-Off Pack	226kg	11869900

### TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 0.10% Mn: 2.00% Si: 0.50%  
Cr: 1.00% Mo: 0.25% Fe: bal

### TYPICAL WELD DEPOSIT HARDNESS:

	HRC	HV30
Single Layer on Mild Steel	28	290

### FINISHING RECOMMENDATIONS:

Machinable.

### RECOMMENDED SHIELDING GASES:

- Open arc or welding grade CO<sub>2</sub>

### COMPARABLE CIGWELD PRODUCTS:

Cobalarc 350 extruded electrode  
AS/NZS 2576:1435-A4  
Stoody Super Build Up-G/O  
AS/NZS 2576:1435-B5/B7



## STOODY 600

HV<sub>30</sub>  
700AC  
DC

(Replaces Cobalarc Impactaclad-0)

- ▲ Self shielded (-O) tubular hardfacing wires.
- ▲ Crack free, martensitic alloy steel containing hard, titanium carbides.
- ▲ Excellent resistance to high stress abrasion and heavy impact.

## Classifications:

AS/NZS 2576: 1955-B7  
W.T.I.A. Tech Note 4: 1955-B7

## Description and Applications:

Stoody 600 is a new generation Cobalarc tubular wire which deposits a martensitic alloy steel containing a high volume fraction of fine, hard titanium carbides.

The unique microstructure of Stoody 600 makes it particularly suitable for high stress abrasion and heavy impact conditions. A minimum of two layers of Stoody 600 is recommended for optimum service performance. Weld deposits are normally free from relief checking and have good hardness retention to ≈500°C

Typical applications of Stoody 600 include the surfacing of mill hammers, bucket teeth and lips, tampers, agitator screws and other components subjected to extreme abrasion and moderate to heavy impact.

## Finishing Recommendations:

The all weld metal microstructure of Stoody 600 shows an even dispersion (≈10% by volume) of fine, hard titanium carbides in a high chromium martensitic matrix resistant to high stress abrasion and heavy impact loading

## Packaging and Operating Data:

DC Electrode Positive

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.6mm	200-300	22-26	20-25mm	Spool	15kg	11886600
2.4mm	300-400	25-27	35-35mm	Coil	27kg	11846000
2.8mm	400-500	26-28	30-35mm	Coil	27kg	11814400
2.4mm	400-500	26-28	30-35mm	Pay-off Pack	226kg	11929400

## TYPICAL ALL WELD DEPOSIT ANALYSIS:

C: 1.7% Mn: 1.6% Si: 0.5%  
Cr: 7.5% Mo: 1.3% Ti: 5.3%

## TYPICAL WELD DEPOSIT HARDNESS:

	HR <sub>C</sub>	HV <sub>30</sub>
Single Layer or Mild Steel	58	670
Two layers of Mild Steel	60	690
3-8 layers of Mild Steel	60	690

Deposits contain Titanium Carbides with hardness up to 3,200HV

## FINISHING RECOMMENDATIONS:

Grinding Only

## RECOMMENDED SHIELDING GASES:

Open Arc Operation

(Replaces Cobalarc Abrasoclad-O)

- ▲ Self shielded (-O), tubular hardfacing wire.
- ▲ Complex niobium / chromium carbide iron deposit.
- ▲ Resistant to sever fine or coarse abrasion and low to moderate impact.
- ▲ Now available in 1.6mm size on 15kg spools.

**Classifications:**

AS/NZS 2576: 2460-B7  
W.T.I.A.Tech Note 4: 2460-B7

**Description and Applications:**

Stoody 143-O is a high alloy tubular hardfacing wire depositing a complex chromium carbide iron resistant to extreme abrasion and low to moderate impact loading. The addition of nominally 7% niobium to Stoody 143-O produces a complex chromium / niobium carbide iron weld deposit which is particularly resistant to severe low and high stress abrasion and low to moderate impact loading at temperatures up to ≈ 650°C.

The nodular niobium rich carbide structure of Stoody 143-O is capable of withstanding higher impact loading than standard chromium carbide alloy types. The low dilution sensitivity means that two layers will normally be sufficient to achieve optimum wear resistance. Stoody 143-O deposits will readily stress relief check and can only be finished by grinding. Typical applications include the surfacing of conveyor screws, pug mill paddles, wear plates, fan blades, coke chutes / shoes and grizzly bars, etc.

**Weld Deposit Microstructure:**

The addition of nominally 7% niobium to Stoody 143-O initiates the formation of a complex niobium / chromium carbide iron structure which resists extreme high or low stress abrasion even under conditions of moderate impact.

**Packaging and Operating Data:**

DC Electrode Positive

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO) mm	Pack Type	Pack Weight	Part No
1.6	200-300	22-26	20-25	Spool	15kg	11877000
2.8	300-450	27-33	35-55	Coil	27kg	11867800
2.8	300-450	27-33	35-55	Pay-off Pack	226kg	11857800

**TYPICAL ALL WELD DEPOSIT ANALYSIS:**

Single Layer on Mild Steel		
C: 3.7%	Mn: 0.6%	Si: 0.3%
Cr: 16%	Nb: 5%	
All Weld Metal Deposit		
C: 5.2%	Mn: 0.7%	Si: 0.4%
Cr: 22%	Nb: 7.3%	

**TYPICAL WELD DEPOSIT HARDNESS:**

	HRC	HV30
Single Layer on Mild Steel	58	670
All Weld Metal Deposit	62	760
Deposits contain niobium carbides with hardness up to 2,400 HV.		

**FINISHING RECOMMENDATIONS:**

Grinding only.

**RECOMMENDED SHIELDING GASES:**

- Open arc or welding grade CO<sub>2</sub>

**COMPARABLE CIGWELD PRODUCTS:**

Cobalarc 9 tubular electrode  
AS/NZS 2576: 2460-A1

## STOODY 145 OPEN ARC WIRE

### Description and Applications:

Stoody 145 is a highly alloyed open arc wire, with high abrasion resistance, high corrosion resistance, and high hardness at elevated temperature. The Stoody 145 alloyed wire contains columbium (niobium), which contributes to its excellent high temperature abrasion resistance up to 1500°F (816°C).

- Iron and Steel Industry: Guides, Sinter Plant Parts, Blast Furnace Parts, Slag Rakes, Hot Ash Elbows, Exhaust Fan Blades, Crushers, Coke Pusher Shoes, Hot Screens, Tilt fingers, Hot Billet Handlers.
- Cement and Refractory: Cement Screws, Cement Dryers, Hot Cement Cones, Cement Furnace Parts, Mixer Blades, Presses.
- Non-Ferrous Metals: Copper Ladles, Slag Ladles, Zinc Pots, Tin Mill Parts, Copper Bar Guides, Zinc Scrapers.
- Mining: wear Plates, Excavator Bucket Teeth, Conveyor Screws, Slurry Pipes.

### TYPICAL DEPOSIT CHEMISTRY (WT%):

C: 5.8%	Cr: 24%	Mo: 6.3%	Mn: 1.0%	Cb: 5.1%
W: 1.8%	V: 0.8%	Si: 0.7%	Fe: Bal	

### FINISHING RECOMMENDATIONS:

Ginding Only

### DEPOSIT CHARACTERISTICS:

Abrasion resistance	Excellent
Impact resistance	Low
Hardness 2 Layers	56-61HRC
Surface cross checks	Yes
Machinability	Gind Only
Magnetic	Yes
Deposit thickness	2 Maximum
Hot Wear Applications	Up to 1500°F (816°C)

### COMPARABLE CIGWELD PRODUCTS:

### Packaging and Operating Data:

Wire diameter mm	Current Range (amps)	Voltage Range (volts)	Wire Extension mm	Pack Type	Pack Weight	Part No
2.8	300-550	28-34	19-32	Coil	27kg	11414300
2.8	300-550	28-34	19-32	Coil	226kg POP	11440200

## STOODY "S" FLUX

### Description and Applications:

Stoody "S" Flux is an active fused flux designed for use with Stoody Submerged Arc Welding Wires (other than the thermaClad® wire). As the deposit composition is significantly altered from the wire composition, care should be exercised in the matching of this flux to the right wire.

### Packaging and Operating Data:

Stoody "S" Flux is available in 22kg Bags (Part Number: 11008400)



