

Low Alloy

MMA Electrodes

Ferrocrafft 61Ni H4

- Now in hermetically sealed 3kg cans
- Highly basic, E4818-G/E7018-G type hydrogen controlled electrode
- Very low 'H5/H4' diffusible hydrogen class
- C-Mn-Ni weld deposit for reliable impact properties to -50°C
- Batch number identification
- Recommended for the critical welding of C-Mn, micro-alloyed and low alloy structural steels in the 350–450 MPa yield strength class
- Applications include the all positional (except vertical-down) fillet and butt welding of pressure vessels, offshore platforms, pipes and earth-moving equipment

Classifications

AS/NZS 1553.2: E4818-G
AWS/ASME-SFA A5.5: E7018-G

Typical all weld metal mechanical properties

| | |
|-------------------|---|
| Yield stress | 450 MPa |
| Tensile strength | 560 MPa |
| Elongation | 27% |
| CVN impact values | 130J av @ -20°C 80J av @ -40°C 60J av @ -50°C |

Typical all weld metal analysis (%)

| C | Mn | Si | Ni | S | P |
|------|------|------|-----|-------|-------|
| 0.07 | 1.20 | 0.25 | 0.9 | 0.007 | 0.012 |

Typical diffusible hydrogen levels to AS3752

3.0–3.5 ml of hydrogen / 100 gm of deposited weld metal*

*Reconditioned for 2 hours maximum at 350°C

Approvals

| | |
|-----------------------------|----------------|
| Lloyds Register of Shipping | Grade 3, 3YH5 |
| American Bureau of Shipping | Grade 3H10, 3Y |
| Det Norske Veritas | Grade 3Y H5 |

Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity

| Electrode | | Approx No. (rods/kg) | Current Range (A) | Packet (kg) | Carton (kg) | Part No. |
|-----------|-------------|----------------------|-------------------|-------------|-------------|----------|
| Size (mm) | Length (mm) | | | | | |
| 2.5 | 350 | 53 | 80–110 | 3 | 12 (4x3) | 611812 |
| 3.2 | 350 | 26 | 110–145 | 3 | 12 (4x3) | 611813 |
| 4.0 | 350 | 17 | 140–200 | 3 | 12 (4x3) | 611814 |

Ferrocrafft 61Ni H4i is formulated to operate with AC (min 70 OCV), DC+ or DC- polarity. The preferred polarity for fillet welding and fill and capping passes is DC+.

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

MMA Electrodes

Alloycraft 70-A1

- Hermetically sealed cans
- Improved high strength, low alloy steel electrode
- Advanced moisture resistant flux coating
- Very low 'H5' diffusible hydrogen class
- 480 MPa tensile class
- Recommended for DC welding applications
- Batch numbered for identification

| Classifications |
|----------------------------------|
| AS/NZS 1553.2: E4818-A1. H5R |
| AWS/ASME-SFA A5.5: E7018-A1 H4R. |

| Typical All Weld Metal Mechanical Properties | |
|--|----------|
| Yield Stress | 480 MPa. |
| Tensile Strength | 570 MPa. |
| Elongation | 25%. |

| Typical all weld metal analysis (%) | | | | | | |
|-------------------------------------|------|------|------|-------|-------|--|
| C | Mn | Si | Mo | S | P | |
| 0.03 | 0.77 | 0.37 | 0.53 | 0.013 | 0.015 | |

| Typical Diffusible Hydrogen Levels to AS3752 | |
|--|--|
| 3.0–3.5 mls of hydrogen / 100gms of deposited weld metal | |

| Approvals | |
|------------------------------|---------------|
| Lloyd's Register of Shipping | Grade 3, 3YH5 |
| American Bureau of Shipping | Grade 3H5, 3Y |
| Det Norske Veritas | Grade 3YH5 |

| Packaging and operating data — AC (min. 75 OCV), DC+ or DC- polarity | | | | | | |
|--|-------------|------------------------|-------------------|-----|-------------|----------|
| Electrode | | Approx No. (rods / kg) | Current Range (A) | Can | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| *2.5 | 350 | 42 | 65–100 | 3kg | 12 (3x4) | 611842 |
| *3.2 | 350 | 26 | 95–150 | 3kg | 12 (3x4) | 611843 |
| *4.0 | 350 | 17 | 145–220 | 3kg | 12 (3x4) | 611844 |

Alloycraft 70-A1 is formulated to operate with AC (min 70 OCV), DC+ or DC- polarity. The preferred polarity for DC welding is DC+.

*Non-stock item available on indent only.

Alloycraft 80-B2

- Improved high strength, low alloy steel electrode
- Advanced flux coating
- Very low 'H5' diffusible hydrogen class
- 550 MPa tensile class
- Batch numbered for on-the-job traceability
- Recommended for the all positional (except vertical-down) welding of chromium and chromium-molybdenum bearing steels as used in elevated temperature applications
- Hermetically sealed cans

| Classifications |
|--------------------------------|
| AS/NZS 1553.2: E5518-B2 |
| AWS/ASME-SFA A5.5: E8018-B2 H4 |

| Typical all weld metal mechanical properties | |
|--|---------|
| 0.2% Proof stress | 570 MPa |
| Tensile strength | 670 MPa |
| Elongation | 24% |

| Typical all weld metal analysis (%) | | | | | | | |
|-------------------------------------|------|------|-------|------|------|-------|--|
| C | Mn | Si | P | Mo | Cr | S | |
| 0.08 | 0.82 | 0.39 | 0.015 | 0.65 | 1.40 | 0.013 | |

| Typical diffusible hydrogen levels to AS3752 | |
|--|--|
| 3.0–3.5 ml of hydrogen / 100 gm of deposited weld metal* | |

*Reconditioned for 2 hours maximum at 350°C

| Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity | | | | | | |
|---|-------------|------------------------|-------------------|-------------|-------------|----------|
| Electrode | | Approx No. (rods / kg) | Current range (A) | Packet (kg) | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| 2.5 | 350 | 40 | 65–100 | 3 | 12 (3x4) | 611922 |
| 3.2 | 350 | 26 | 105–150 | 3 | 12 (3x4) | 611923 |
| 4.0 | 350 | 17 | 145–200 | 3 | 12 (3x4) | 611924 |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Alloycraft 80-C1

- Hermetically sealed cans
- Improved high strength, low alloy steel electrode
- Very low 'H5' diffusible hydrogen class
- 550 MPa tensile class, reliable impact toughness to -60°C
- Batch numbered for on-the-job traceability
- Suitable for the full or under matching strength welding of high strength nickel bearing steels as used for low temperature applications

| Classifications |
|--------------------------------|
| AS/NZS 1553.2: E5518-C1 |
| AWS/ASME-SFA A5.5: E8018-C1 H4 |

| Typical all weld metal mechanical properties | |
|--|----------------|
| 0.2% Proof Stress | 550 MPa |
| Tensile strength | 630 MPa |
| Elongation | 26% |
| CVN impact values | 75J av @ -60°C |

| Typical all weld metal analysis (%) | | | | | | |
|-------------------------------------|-----|------|------|-------|-------|--|
| C | Mn | Si | Ni | S | P | |
| 0.05 | 1.1 | 0.38 | 2.46 | 0.013 | 0.015 | |

| Typical diffusible hydrogen levels to AS3752 |
|--|
| 3.0–3.5 ml of hydrogen/100 gm of deposited weld metal* |

*Reconditioned for 2 hours maximum at 350°C

| Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity | | | | | | |
|---|-------------|----------------------|-------------------|-------------|-------------|----------|
| Electrode | | Approx No. (rods/kg) | Current range (A) | Packet (kg) | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| 3.2 | 350 | 26 | 110–145 | 3 | 12 (3x4) | 611833 |
| 4.0 | 350 | 17 | 140–200 | 3 | 12 (3x4) | 611834 |
| 5.0 | 350 | 11 | 190–270 | 3 | 12 (3x4) | 611835 |

Alloycraft 80-C1 is formulated to operate with AC (min 70 OCV), DC+ or DC- polarity. The preferred polarity for DC welding is DC+.

Alloycraft 90-B3

- Hermetically sealed cans
- Improved high strength, low alloy steel electrode
- Very low 'H5' diffusible hydrogen class
- 620 MPa tensile class
- Batch numbered for on-the-job traceability
- Recommended for the all positional (except vertical-down) welding of Cr-Mo and Cr-Mo-V bearing steels as used for high temperature applications

| Classifications |
|--------------------------------|
| AS/NZS 1553.2: E6218-B3 |
| AWS/ASME-SFA A5.5: E9018-B3 H4 |

| Typical all weld metal mechanical properties | |
|--|---------|
| 0.2% Proof Stress | 630 MPa |
| Tensile strength | 720 MPa |
| Elongation | 20% |

| Typical all weld metal analysis (%) | | | | | | |
|-------------------------------------|------|------|------|------|-------|-------|
| C | Mn | Si | Mo | Cr | S | P |
| 0.08 | 0.85 | 0.35 | 1.05 | 2.20 | 0.013 | 0.015 |

| Typical diffusible hydrogen levels to AS3752 |
|---|
| 3.0–3.5 ml of / 100 gm of deposited weld metal* |

*Reconditioned for 2 hours maximum at 350°C

| Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity | | | | | | |
|---|-------------|----------------------|-------------------|-------------|-------------|----------|
| Electrode | | Approx No. (rods/kg) | Current range (A) | Packet (kg) | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| 3.2 | 350 | 26 | 105–150 | 3 | 12 (3x4) | 611963 |
| 4.0 | 350 | 17 | 145–200 | 3 | 12 (3x4) | 611964 |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

MMA Electrodes

Alloycraft 90

- Hermetically sealed cans
- Improved high strength, low alloy steel electrode
- Very low 'H5' diffusible hydrogen class
- 620 MPa tensile class, reliable impact toughness to -40°C
- Batch numbered for on-the-job traceability
- Applications include the full or under matching strength welding of high strength steels, including Bisalloy 60, 70 and 80, Welten 60 and 80, AS2074 Gr L6, Comsteel 023/026, ASTM A514 and A517 used in structural, transport, mining and earthmoving applications

Classifications

AS/NZS 1553.2: E6218M
AWS/ASME-SFA A5.5: E9018M H4

| Typical all weld metal mechanical properties | |
|--|----------------|
| 0.2% proof stress | 590 MPa |
| Tensile strength | 680 MPa |
| Elongation | 26% |
| CVN impact values | 90J av @ -40°C |

| Typical all weld metal analysis (%) | | | | |
|-------------------------------------|-----|------|-----|-----|
| C | Mn | Si | Ni | Mo |
| 0.07 | 1.0 | 0.40 | 1.6 | 0.3 |

Typical diffusible hydrogen levels to AS 3752
3.0–3.5 ml of /100 gm of deposited weld metal*

*Reconditioned for 2 hours maximum at 350°C

| Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity | | | | | | |
|---|-------------|----------------------|-------------------|-------------|-------------|----------|
| Electrode | | Approx no. rods / kg | Current range (A) | Packet (kg) | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| 3.2 | 350 | 26 | 110–145 | 3 | 12 (3 x 4) | 611873 |
| 4.0 | 350 | 17 | 140–200 | 3 | 12 (3 x 4) | 611874 |
| 5.0 | 350 | 11 | 190–270 | 3 | 12 (3 x 4) | 611875 |

Alloycraft 90 is formulated to operate with AC (min 70 OCV), DC+ or DC- polarity. The preferred polarity for DC welding is DC+.

Alloycraft 110

- Hermetically sealed cans
- Improved high strength, low alloy steel electrode
- Low 'H5' diffusible hydrogen class
- 760 MPa tensile class, reliable impact toughness to -40°C
- Batch numbered for on-the-job traceability
- Applications include the full strength welding of high strength steels, including Bisalloy 80, USST1 and T1A, welten 80, HY80, AS2074 Grade L6A and ASTM A533 type A, A514 and A517 grades used in structural transport, mining and earthmoving applications

Classifications

AS/NZS 1553.2: E7618-M
AWS/ASME-SFA A5.5: E11018M H4

| Typical all weld metal mechanical properties | |
|--|----------------|
| 0.2% Proof stress | 710 MPa |
| Tensile strength | 820 MPa |
| Elongation | 22% |
| CVN impact values | 60J av @ -50°C |

| Typical all weld metal analysis (%) | | | | | |
|-------------------------------------|-----|------|-----|-----|-----|
| C | Mn | Si | Ni | Mo | Cr |
| 0.07 | 1.5 | 0.45 | 2.1 | 0.4 | 0.2 |

Typical diffusible hydrogen levels to AS 3752
3.0–3.5 ml of /100 gm of deposited weld metal*

*Reconditioned for 2 hours maximum at 350°C

| Packaging and operating data — AC (min. 70 OCV) DC+ or DC- polarity | | | | | | |
|---|-------------|------------------------|-------------------|-------------|-------------|----------|
| Electrode | | Approx no. rods / (kg) | Current range (A) | Packet (kg) | Carton (kg) | Part No. |
| Size (mm) | Length (mm) | | | | | |
| 3.2 | 350 | 26 | 110–145 | 3 | 12 (3 x 4) | 611893 |
| 4.0 | 350 | 17 | 140–200 | 3 | 12 (3 x 4) | 611894 |

Alloycraft 110 is formulated to operate with AC (min 70 OCV), DC+ or DC- polarity. The preferred polarity for DC welding is DC+.

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Autocraft Mn-Mo

- A manganese molybdenum steel wire for the GMA welding of higher strength steels
- For use with welding grade CO₂ or argon based shielding gases
- 550 MPa tensile class weld deposits
- Suitable for the all positional fillet and butt welding of a wide range of higher strength steels, particularly those used in the fabrication of pressure vessels, boilers and pipelines

Classifications

AWS/ASME-SFA A5.28: ER80S-D2

| Typical all weld metal mechanical properties | | | | | | |
|--|----------------|------|------|-------|-------|-----------------------------|
| | | | | | | Argon20–25% CO ₂ |
| Yield stress | 580 MPa | | | | | |
| Tensile strength | 680 MPa | | | | | |
| Elongation | 24% | | | | | |
| CVN impact values | 80J av @ +20°C | | | | | |
| Typical wire analysis (%) | | | | | | |
| C | Mn | Si | Mo | S | P | |
| 0.08 | 1.73 | 0.65 | 0.45 | 0.011 | 0.017 | |

| Typical diffusible hydrogen levels to AS3752 |
|---|
| 1.0–2.0 ml of hydrogen/100 gm of deposited weld metal |
| Recommended shielding gas |
| Argoshield® 52 |
| Argoshield® 54 |
| Stainshield® |
| Welding Grade CO ₂ |

Packaging and operating data

| Dia. (mm) | Voltage (V) | Wire feed speed (m/min) | Current Range (A) | Pack type* | Pack weight (kg) | Part No. |
|-----------|-------------|-------------------------|-------------------|------------|------------------|----------|
| 0.9 | 16–28 | 3.5–15 | 70–230 | Spool | 15 | 720049 |
| 1.2 | 18–32 | 3.5–15 | 120–350 | Spool | 15 | 720052 |

* Spool (ø300 mm)

Autocraft NiCrMo

- A low alloy steel wire for the GMA welding of high strength steels
- For use with welding grade CO₂ or argon based shielding gases
- 760 MPa tensile class weld deposits
- Suitable for the all positional fillet and butt welding of a wide range of high strength steels, particularly quenched and tempered types such as Bisalloy 80, USS-T1 types and Welten 80C etc.

Classifications

AS/NZS 2717.1: ESMG-GC/M-W769AH
AWS/ASME-SFA A5.28: ER110S-G

| Typical all weld metal mechanical properties | | | | | | | |
|--|--------------|------|------|---------------------------|------------------------------|------|-------------|
| | | | | Argon 1–3% O ₂ | Argon 20–25% CO ₂ | | |
| Yield stress | 730 MPa | | | 707 MPa | | | |
| Tensile strength | 790 MPa | | | 770 MPa | | | |
| Elongation | 17% | | | 21% | | | |
| CVN impact values | 130J @ -29°C | | | 72J @ -29°C | | | 50J @ -51°C |
| | 80J @ -51°C | | | | | | |
| Typical wire analysis (%) | | | | | | | |
| C | Mn | Si | Ni | Cr | Mo | V | |
| 0.08 | 1.40 | 0.60 | 1.40 | 0.40 | 0.25 | 0.10 | |

| Typical diffusible hydrogen levels to AS3752 |
|---|
| 1.0–2.0 ml of hydrogen/100 gm of deposited weld metal |
| Recommended shielding gas |
| Argoshield® 52 |
| Argoshield® 54 |
| Stainshield® |
| Welding Grade CO ₂ |

Packaging and operating data

| Dia. (mm) | Voltage (V) | Wire feed speed (m/min) | Current Range (A) | Pack type* | Pack weight (kg) | Part No. |
|-----------|-------------|-------------------------|-------------------|------------|------------------|----------|
| 1.2 | 18–32 | 3.5–15 | 120–350 | Spool | 15 | 720053 |

* Spool (ø300 mm)

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

GMAW Wire

Autocraft CrMo1

- A low alloy steel wire for the GMA welding of matching Cr-Mo steels
- Recommended for the GMA welding of 1/2Cr-1/2Mo, 1Cr-1/2Mo and 1 1/4Cr-1/2Mo steel pipes, plates and castings

Classifications

AS/NZS 2717.1: ESB2-GM-W559AH
AWS/ASME-SFA A5.28: ER80S-B2

Typical all weld metal mechanical properties

| | Argon 1–3% O ₂ |
|-------------------|---------------------------|
| 0.2% Proof stress | 500 MPa |
| Tensile strength | 600 MPa |
| Elongation | 20% |
| CVN impact values | 60J av @ +20°C |

Post weld heat treated at 620°C as required by AWS A5.28

Typical wire analysis (%)

C: 0.09 Mn: 0.60 Si: 0.60

Cr: 1.30 Mo: 0.50 P: 0.015

S: 0.010 Fe: Balance

Typical diffusible hydrogen levels to AS 3752

1.0–2.0 ml of hydrogen / 100 gm of deposited weld metal

Recommended shielding gas

Argoshield® 52
Stainshield®

Packaging and operating data

| Dia. (mm) | Voltage (V) | Wire feed speed (m / min) | Current Range (A) | Pack type* | Pack weight (kg) | Part No. |
|-----------|-------------|---------------------------|-------------------|------------|------------------|----------|
| 1.2 | 18–32 | 3.5–15 | 120–350 | Spool | 15 | 720029 |

* Spool (ø300 mm)

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

SmoothCor™ 811K2

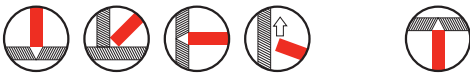
Description

SmoothCor™ 811K2 is a rutile type flux cored wire designed to provide excellent low temperature impact toughness. It is suitable for use with both Ar/CO₂ or CO₂ shielding gas and can be used in all positions, including downhand, vertical-up and overhead. Designed for single and multi pass welding, SmoothCor™ 811K2 deposits a weld metal containing approximately 1.5% nickel. The nickel content of the weld metal ensures excellent impact properties at temperatures below -60°C, with radiographic quality that is consistently high. The very low H4 hydrogen class ensures superior crack resistance. A rutile based wire, SmoothCor™ 811K2 welds with a very smooth-running, low spatter arc and a fine spray type transfer to give excellent weld pool control. With its excellent feedability and easy arc starting characteristics, SmoothCor™ 811K2 has excellent operator appeal.

Application

SmoothCor™ 811K2 is recommended for welding fine-grained, low alloy steels intended for service at low temperatures and for matching strength on 490 MPa yield strength steels. It is also eminently suitable for welding fine-grained and quench and tempered steels where undermatching strength weld metal is desirable.

Welding Positions



| Specifications | | | | |
|--|-----------------------------|--|------|------|
| Flux Type | Rutile | | | |
| Classification | AWS/ASME-SFA A5.29 | E81T1-K2 H4, E81T1-K2M H4 | | |
| | AS 2203.1 | ETP-GCp-W559A.K2 H5 ETP-GMp-W559A.K2 H5 | | |
| Approvals* | Lloyds Register of Shipping | Grade 5Y 40S H5 | | |
| | Det Norske Veritas | Grade 4YSA H5 | | |
| | American Bureau of Shipping | Grade 5YMS H5 | | |
| Welding Current | DC+ | | | |
| *With Ar/CO ₂ and CO ₂ shielding gas | | | | |
| Recommended Shielding Gases: | | | | |
| Argoshield® 52 or Ar+20–25% CO ₂ mixtures | | | | |
| Welding Grade CO ₂ | | | | |
| Flow rate 15–20 L/min | | | | |
| Chemical Composition, wt% – All Weld Metal | | | | |
| Typical | C | Si | Mn | Ni |
| Argoshield® 52 | 0.05 | 0.45 | 1.15 | 1.54 |
| CO ₂ | 0.04 | 0.38 | 1.07 | 1.54 |

| Mechanical Properties – All Weld Metal | | |
|--|----------------------|-----------------------|
| As Welded | Using Argoshield® 52 | Using CO ₂ |
| Yield strength | 490 MPa min | 490 MPa min |
| Tensile strength | 560–640 MPa | 560–640 MPa |
| Elongation | 25% min | 25% min |
| Impact energy, CVN | 125J av @ -29°C | 120J av @ -29°C |
| | 85J av @ -40°C | 80J av @ -40°C |
| | 76J av @ -60°C | 73J av @ -60°C |

| PWHT* | | |
|--------------------|----------------------|-----------------------|
| | Using Argoshield® 52 | Using CO ₂ |
| Yield strength | 480 MPa min | 470 MPa min |
| Tensile strength | 550–620 MPa | 550–620 MPa |
| Elongation | 25% min | 25% min |
| Impact energy, CVN | 75J av @ -29°C | 70J av @ -29°C |
| | 65J av @ -40°C | 60J av @ -40°C |
| | 50J av @ -60°C | 45J av @ -60°C |

* PWHT 625°C 2 hours

| Diffusible Hydrogen | |
|--|---------------------------|
| 1.2 mm, 100% CO ₂ , DC+, 230 amps, 27 volts, 20 mm stick-out: | <4ml/100g (vacuum packed) |
| 1.2 mm, Argoshield® 52, DC+, 230 amps, 27 volts, 20 mm stick-out: | <4ml/100g (vacuum packed) |

| Packaging Data | | |
|----------------|-----------------------|-----------------------|
| Dia. (mm) | 1.2 | 1.6 |
| Part No. | 10811K212 | 10811K216 |
| Type | Spool (vacuum packed) | Spool (vacuum packed) |
| Weight (kg) | 15 | 15 |

| Welding Parameters | | | | | | |
|--------------------------|------------------|---------|-------------|---------|----------|---------|
| Welding Position | Flat, Horizontal | | Vertical-up | | Overhead | |
| | 1.2 | 1.6 | 1.2 | 1.6 | 1.2 | 1.6 |
| Dia. (mm) | 1.2 | 1.6 | 1.2 | 1.6 | 1.2 | 1.6 |
| Current Range (A) | 150–290 | 180–400 | 150–250 | 180–300 | 150–250 | 180–310 |
| Voltage (V) | 23–30 | 25–34 | 22–26 | 21–27 | 23–26 | 22–27 |
| Electrode Stick-out (mm) | 15–20 | 20–25 | 15–20 | 20–25 | 15–20 | 20–25 |

| Deposition Data | | | | | |
|-----------------|-------------|-------------|---------------------------------|------------------------|----------------|
| Dia. (mm) | Current (A) | Voltage (V) | Wire Feed Speed (m/min) Approx. | Deposition Rate (kg/h) | Efficiency (%) |
| 1.2 | 150 | 28 | 5.08 | 1.91 | 86 |
| | 210 | 29 | 7.62 | 2.86 | 86 |
| | 250 | 30 | 10.16 | 3.86 | 87 |
| | 290 | 33 | 12.70 | 4.85 | 87 |
| 1.6 | 330 | 34 | 15.24 | 5.76 | 87 |
| | 190 | 27 | 3.81 | 2.77 | 87 |
| | 300 | 30 | 6.35 | 4.63 | 87 |
| | 365 | 33 | 7.62 | 5.58 | 86 |
| | 410 | 33 | 8.89 | 6.35 | 88 |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

SmoothCor™ 115

Description

SmoothCor™ 115 is a basic type flux cored wire designed for the welding of high tensile low alloy steels. It is suitable for use with both Ar / CO₂ or CO₂ shielding gas and can be used in both the flat and horizontal position. Designed for single and multi pass welding, SmoothCor™ 115 deposits a weld metal containing approximately 2.25% nickel, 0.5% molybdenum and 0.3% chromium which, apart from having good tensile properties, is extremely tough and ductile. The very low H4 hydrogen class ensures superior crack resistance. The wire produces weld metal of the highest radiographic and metallurgical quality. SmoothCor™ 115 welds with particularly stable running characteristics, a minimum amount of spatter and easy slag removal for this class of wire. Feedability is excellent.

Application

SmoothCor™ 115 is recommended for welding a range of high strength, fine-grained structural steels, low temperature steels and quench and tempered steels. Produces matching strength and hardness on 690 MPa yield strength and 230 HB steels (e.g. AS 3597 grade 700, ASTM A514). Weld deposits are resistant to cracking in heavy sections or under high restraint.

Welding Positions



Specifications

| | | |
|-----------------|-----------------------------|--|
| Flux Type | Basic | |
| Classification | AWS/ASME-SFA A5.29 | E110T5-K4 H4 E110T5-K4M H4 |
| | AS 2203.1 | ETD-GMp-W769A.K4 H5 ETD-GCp-W769A.K4 H5 |
| Approvals* | American Bureau of Shipping | AWS A5.29 E110T5-K4M |
| Welding Current | DC+ | |

*With Ar / CO₂ shielding gas

| | |
|--|--|
| Recommended Shielding Gases | |
| Argoshield® 52 or Ar+20–25% CO ₂ mixtures | |
| Welding Grade CO ₂ | |
| Flow rate 15–20 L/min | |

| | | | | | | |
|--|------|------|------|------|------|------|
| Chemical Composition, wt% – All Weld Metal | | | | | | |
| Typical | C | Si | Mn | Ni | Mo | Cr |
| Argoshield® 52 | 0.07 | 0.38 | 1.55 | 2.29 | 0.44 | 0.27 |
| CO ₂ | 0.06 | 0.30 | 1.40 | 2.29 | 0.44 | 0.22 |

| | | |
|--|----------------------|-----------------------|
| Mechanical Properties – All Weld Metal | | |
| As Welded | Using Argoshield® 52 | Using CO ₂ |
| Yield strength | 690 MPa min | 690 MPa min |
| Tensile strength | 760–880 MPa | 760–840 MPa |
| Elongation | 17% min | 17% min |
| Impact energy, CVN | 30J min av @ -51°C | 50J min av @ -51°C |

| | |
|--|---------------------------|
| Diffusible Hydrogen | |
| 1.2 mm, 100% CO ₂ , DC+, 230 amps, 27 volts, 20 mm stick-out: | <4ml/100g (vacuum packed) |
| 1.2 mm, Argoshield® 52, DC+, 230 amps, 27 volts, 20 mm stick-out: | <4ml/100g (vacuum packed) |

| | | |
|----------------|-----------------------|-----------------------|
| Packaging Data | | |
| Dia. (mm) | 1.2 | 1.6 |
| Part No. | 1011512 | 1011516 |
| Type | Spool (vacuum packed) | Spool (vacuum packed) |
| Weight (kg) | 15 | 15 |

| | | |
|--------------------------|------------------|---------|
| Welding Parameters | | |
| Dia. (mm) | 1.2 | 1.6 |
| Current Range (A) | 150–290 | 180–400 |
| Voltage (V) | 23–30 | 25–34 |
| Electrode Stick-out (mm) | 15–20 | 20–25 |
| Welding Position | Flat, Horizontal | |

| Deposition Data | | | | | |
|-----------------|-------------|-------------|---------------------------------|------------------------|----------------|
| Dia. (mm) | Current (A) | Voltage (V) | Approx. Wire Feed Speed (m/min) | Deposition Rate (kg/h) | Efficiency (%) |
| 1.2 | 170 | 29 | 7.24 | 3.20 | 96 |
| | 250 | 30 | 11.91 | 4.90 | 91 |
| | 300 | 32 | 15.39 | 6.44 | 92 |
| 1.6 | 300 | 30 | 5.74 | 4.45 | 92 |
| | 400 | 32 | 9.37 | 7.30 | 92 |
| | 450 | 32 | 10.72 | 8.40 | 93 |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Verti-Cor 81Ni1

- A higher strength low alloy steel, rutile type flux cored wire
- Formulated for use with argon +20–25% CO₂ shielding gases
- Versatile, all positional capabilities
- Excellent operator appeal
- Now precision layer wound
- A nominal 1% nickel steel deposit of the 550 MPa tensile class
- Typical applications include the under matching strength fillet welding of Bisalloy 60, 70 and 80 quenched and tempered steels

| Classifications | |
|---------------------------------------|--|
| AS/NZS 2203.1: ETP-GMp-W554A. Ni1 H10 | |
| AWS/ASME-SFA A5.29: E81T1-Ni1MH8 | |

| Typical all weld metal mechanical properties | |
|--|----------------|
| Using Argon +20–25% CO ₂ | |
| Yield stress | 520 MPa |
| Tensile strength | 600 MPa |
| Elongation | 26% |
| CVN impact values | 65J av @ -40°C |

| Typical all weld metal analysis (%)* | | |
|--------------------------------------|-----------|----------|
| C: 0.06 | Mn: 1.35 | Si: 0.35 |
| Ni: 0.90 | Ti: 0.035 | B: 0.007 |

*Using Argon +20–25% CO₂

| Typical diffusible hydrogen levels to AS 3752 | |
|--|--|
| 5.0–6.0 ml of hydrogen / 100 gm of deposited weld metal* | |

* For 'as manufactured' product using Argosshield® Argon +20–25% CO₂

| Recommended shielding gas |
|---------------------------|
| Argosshield® 52 |

| Packaging data | | | |
|----------------|-----------|------------------|----------|
| Dia. (mm) | Pack type | Pack weight (kg) | Part No. |
| 1.2 | Spool | 15 | 720390 |
| 1.6 | Spool | 15 | 720391 |

Operating data
All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and welding grade CO₂ shielding gas with a flow rate of 10–15 L/min.

| Dia. (mm) | Current range (A) | Voltage (V) | Electrode stick-out ESO (mm) | Optimum amps | Volts | Welding positions |
|-----------|-------------------|-------------|------------------------------|--------------|-------|-------------------|
| 1.2 | 250–300 | 27–31 | 20–25 | 280 | 31 | Flat |
| 1.6 | 350–400 | 27–31 | 25–30 | 360 | 31 | |
| 1.2 | 230–280 | 26–30 | 20–25 | 260 | 28 | HV Fillet |
| 1.6 | 310–360 | 26–30 | 25–30 | 320 | 29 | |
| 1.2 | 170–220 | 24–28 | 15–20 | 200 | 24 | Vertical-up |
| 1.6 | 200–250 | 24–28 | 15–20 | 240 | 25 | |
| 1.2 | 160–210 | 24–28 | 15–20 | 200 | 24 | Overhead |
| 1.6 | 190–240 | 24–28 | 15–20 | 220 | 24 | |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Verti-Cor 81 Ni1 H4

- Higher strength copper-coated seamless low alloy, rutile type flux cored wire
- Formulated for use with either Argon + 20–25% CO₂ or CO₂ shielding gases
- Versatile, all positional capabilities
- Outstanding operator appeal
- Low fume levels
- Precision layer wound

| Classifications |
|---|
| AS 2203.1: ETP-GC/Mp-W554A. Ni1 H5 |
| AWS/ASME-SFA A5.29: E81T1-Ni1M H4; E81T1-Ni1 H4 |

| Typical All Weld Metal Mechanical Properties | | |
|--|-------------------------------------|-----------------|
| | Using Argon +20–25% CO ₂ | CO ₂ |
| Yield Stress | 540 MPa | 500 MPa |
| Tensile Strength | 600 MPa | 560 MPa |
| Elongation | 22% | 23% |
| CVN Impact Values | 85J av @ -40°C | 75J av @ -50°C |

| Approvals* | |
|-----------------------------|-------------------|
| Lloyds Register of Shipping | Grade 4Y, 4YS H10 |
| American Bureau of Shipping | Grade 4YSA H5 |
| Det Norske Veritas | Grade 4YMS H10 |

*with Argon +20–25% CO₂ or CO₂ shielding gases

| Typical all weld metal analysis (%) | | | |
|--------------------------------------|-----|------|------|
| C | Mn | Si | Ni |
| Using Argon + 20–25% CO ₂ | | | |
| 0.06 | 1.4 | 0.5 | 1.00 |
| Using CO ₂ | | | |
| 0.05 | 1.1 | 0.38 | 1.16 |

| Typical Diffusible Hydrogen Levels to AS3752 |
|--|
| <3 mls of hydrogen / 100gms of deposited weld metal for 'as manufactured' product using Argon +20–25% CO ₂ or CO ₂ |

| Recommended Shielding Gas | |
|--|--------------|
| Welding Grade CO ₂ Argoshield® 52 | ISO14175: C1 |

| Packaging data | | | |
|----------------|-----------|-------------|----------|
| Wire Dia. (mm) | Pack Type | Weight (kg) | Part No. |
| 1.2 | Spool | 15 | 720550 |
| 1.6 | Spool | 15 | 720551 |

| Operating data | | | | |
|--|-------------------|-------------------|-------|-------------------|
| All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and Argon +20–25% CO ₂ shielding gas with a flow rate of 15–20 L/min. | | | | |
| Wire Dia. (mm) | Current Range (A) | Voltage Range (V) | CTWD | Welding Positions |
| 1.2 | 250–300 | 27–31 | 20–25 | Flat |
| 1.6 | 350–400 | 27–31 | 25–30 | Flat |
| 1.2 | 230–280 | 26–30 | 20–25 | HV Fillet |
| 1.6 | 310–360 | 26–30 | 25–30 | HV Fillet |
| 1.2 | 170–220 | 24–28 | 15–20 | Vertical-up |
| 1.6 | 200–250 | 24–28 | 15–20 | Vertical-up |
| 1.2 | 160–210 | 24–28 | 15–20 | Overhead |
| 1.6 | 190–240 | 24–28 | 15–20 | Overhead |

These machine settings are a guide only. Actual voltage, welding current and CTWD used will depend on machine characteristics, plate thickness, run size, shielding gas and operator technique etc.

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Verti-Cor 91 K2 H4

- Copper coated seamless wire delivering very low H4 class hydrogen levels
- Higher strength low alloy, rutile type flux cored wire
- Formulated for use with Argon + 20–25% CO₂
- Very low hydrogen status
- Low fume levels

Classifications

AS 2203.1: ETP-GMp-W629A. K2 H5.
AWS/ASME-SFA A5.29: E91T1-K2M H4

Typical All Weld Metal Mechanical Properties

| Using Argon + 20–25% CO ₂ | |
|--------------------------------------|-----------------|
| Yield Stress | 560 MPa |
| Tensile Strength | 670 MPa |
| Elongation | 22% |
| CVN Impact Values | >40J av @ -40°C |

| Typical all weld metal analysis (%)* | | | |
|--------------------------------------|-----|-----|-----|
| C | Mn | Si | Ni |
| 0.05 | 1.3 | 0.3 | 1.2 |

*Using Argon + 20–25% CO₂ shielding gas

Typical Diffusible Hydrogen Levels to AS 3752:

<3.5 mls of hydrogen / 100gms of deposited weld metal *

* For 'as manufactured' product using Argon + 20–25% CO₂ shielding gas

| Recommended Shielding Gas |
|---------------------------------------|
| Welding Grade Argon Argoshield® 52 |

Packaging data

| Dia. (mm) | Pack Type | Weight (kg) | Part No. |
|-----------|-----------|-------------|----------|
| 1.2 | Spool | 15 | 720554 |
| 1.6 | Spool | 15 | 720555 |

Operating data

All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and Argon +20–25% CO₂ shielding gas with a flow rate of 15–20 L/min.

| Wire Dia. (mm) | Current Range (A) | Voltage Range (V) | Electrode stick-out ESO (mm) | Welding Positions |
|----------------|-------------------|-------------------|------------------------------|-------------------|
| 1.2 | 250–300 | 27–31 | 20–25 | Flat |
| 1.6 | 350–400 | 27–31 | 25–30 | Flat |
| 1.2 | 230–280 | 26–30 | 20–25 | HV Fillet |
| 1.6 | 310–360 | 26–30 | 25–30 | HV Fillet |
| 1.2 | 170–220 | 24–28 | 15–20 | Vertical-up |
| 1.6 | 200–250 | 24–28 | 15–20 | Vertical-up |
| 1.2 | 160–210 | 24–28 | 15–20 | Overhead |
| 1.6 | 190–240 | 24–28 | 15–20 | Overhead |

These machine settings are a guide only. Actual voltage, welding current and CTWD used will depend on machine characteristics, plate thickness, run size, shielding gas and operator technique etc.

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

FCAW Wire

Gas Assisted

Verti-Cor 111 K3

- A high strength low alloy steel, rutile type flux cored wire
- Formulated for use with argon + 20–25% CO₂ shielding gases
- Versatile, all positional capabilities
- A nickel molybdenum steel deposit of the 760 MPa tensile class
- Typical applications include the full strength butt welding and fillet welding of Bisalloy 80 and similar quenched and tempered steels
- Precision layer wound

| Classifications | |
|--|----------------|
| AS/NZS 2203.1: ETP-GMp-W768A. K3 H10 | |
| AWS/ASME-SFA A5.29: E111T1-K3M H8 | |
| Typical all weld metal mechanical properties | |
| Using Argon +20–25% CO ₂ | |
| 0.2% Proof stress | 775 MPa |
| Tensile strength | 835 MPa |
| Elongation | 18% |
| CVN impact values | 55J av @ -20°C |

| Typical all weld metal analysis (%)* | | | | | |
|--------------------------------------|----------|----------|--|--|--|
| C: 0.06 | Mn: 1.65 | Si: 0.36 | | | |
| Ni: 2.05 | Mo: 0.46 | B: 0.004 | | | |

*Using Argon +20–25% CO₂

| Typical diffusible hydrogen levels to AS 3752 | |
|--|--|
| 5–6 ml of hydrogen / 100 gm of deposited weld metal* | |

* For 'as manufactured' product using an electrode stick-out ESO of 20mm with 1.2mm wire and 25 mm with 1.6 mm wire and mid-range current and voltage (V) settings.

| Recommended shielding gas | |
|---------------------------|--|
| Argoshield® 52 | |

| Packaging data | | | |
|----------------|-----------|-------------|----------|
| Dia. (mm) | Pack type | Weight (kg) | Part No. |
| 1.2 | PLW | 15 | 721381 |
| 1.6 | PLW | 15 | 721382 |

Operating data
All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and Argoshield® 52 shielding gas with a flow rate of 15–20 L/min.

| Dia. (mm) | Current range (A) | Voltage (V) | Electrode stick-out ESO (mm) | Optimum amps | Volts | Welding positions |
|-----------|-------------------|-------------|------------------------------|--------------|-------|-------------------|
| 1.2 | 250–300 | 27–31 | 20–25 | 280 | 31 | Flat |
| 1.6 | 350–400 | 27–31 | 25–30 | 360 | 31 | Flat |
| 1.2 | 230–280 | 26–30 | 20–25 | 260 | 28 | HV Fillet |
| 1.6 | 310–360 | 26–30 | 25–30 | 320 | 29 | HV Fillet |
| 1.2 | 170–220 | 24–28 | 15–20 | 200 | 24 | Vertical-up |
| 1.6 | 200–250 | 24–28 | 15–20 | 240 | 25 | Vertical-up |
| 1.2 | 160–210 | 24–28 | 15–20 | 200 | 24 | Overhead |
| 1.6 | 190–240 | 24–28 | 15–20 | 220 | 24 | Overhead |

Tensi-Cor 110TXP H4

- Fully basic, high strength low alloy steel, seamless flux cored wire
- Formulated for use with CO₂ and Argon + 20–25% CO₂
- Premium quality weld deposits
- 'Very low H₅' hydrogen status
- For the crack-free, full strength butt welding of Bisalloy 80 and similar quenched and tempered steels
- Seamless copper coated
- Precision layer wound

| Classifications | |
|--|----------------|
| AS/NZS 2203.1: | |
| ETD-GCn/p-W769A. K4 H5 | |
| ETD-GMn/p-W769A. K4 H5 | |
| AWS/ASME-SFA A5.29: E110T5-K4 | |
| Typical all weld metal mechanical properties | |
| Using welding grade CO ₂ | |
| Yield stress | 720 MPa |
| Tensile strength | 800 MPa |
| Elongation | 22% |
| CVN impact values | 50J av @ -50°C |

| Typical all weld metal analysis (%)* | | | | | | |
|--------------------------------------|------|------|------|-----|-----|--|
| C | Mn | Si | Ni | Mo | Cr | |
| 0.08 | 1.50 | 0.40 | 1.90 | 0.4 | 0.3 | |

*Using CO₂ shielding gas

| Typical diffusible hydrogen levels to AS3752 | |
|---|--|
| <3–5 ml of hydrogen / 100 gm of deposited weld metal* | |

*For 'as manufactured' product using welding grade CO₂ shielding gas

| Recommended shielding gases | |
|---|--|
| Welding Grade CO ₂ Argoshield® 52 | |

| Packaging data | | | |
|----------------|-----------|-------------|----------|
| Dia. (mm) | Pack type | Weight (kg) | Part No. |
| 1.6 | Spool | 15 | 720387 |
| 2.4 | Coil | 25 | 720389 |

Operating data
All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and welding grade CO₂ shielding gas with a flow rate of 15–20 L/min.

| Dia. (mm) | Current range (A) | Voltage (V) | Electrode stick-out ESO (mm) | Optimum amps | Volts | Welding positions |
|-----------|-------------------|-------------|------------------------------|--------------|-------|-------------------|
| 1.6 | 300–350 | 28–32 | 25–30 | 320 | 29 | Flat |
| 2.4 | 400–450 | 28–32 | 25–35 | 450 | 32 | Flat |
| 1.6 | 280–330 | 27–31 | 25–30 | 300 | 28 | HV Fillet |
| 2.4 | 380–430 | 27–31 | 25–30 | 400 | 28 | HV Fillet |
| 1.6 | 220–270 | 25–30 | 25–30 | 280 | 26 | Vertical-up |
| 1.6 | 260–310 | 27–31 | 25–30 | N/A | N/A | Horizontal |
| 2.4 | 360–410 | 27–31 | 25–30 | N/A | N/A | Horizontal |

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Gas Assisted FCAW Wire

Outershield 81Ni1-H

Produces weld deposits exhibiting excellent low temperature impacts and CTOD values. Ideally suited to applications requiring superior mechanical properties in the as welded condition.

| Classifications | | |
|--|--|--|
| AS 2203.1: ETP-GMp-W554. Ni1.H5;AWS A5.29: E81T1-Ni1 | | |

| Size (mm) | Weight (kg) | Part No. |
|-----------|--------------|----------|
| 1.2 | 15 Readireel | 941357 |
| 1.6* | 15 Readireel | 942750 |

*No spool adaptor required

Outershield 91K2-H

For HY-80, HSLA-80 and similar steels. Produces weld deposits exhibiting excellent low temperature impact values.

| Classifications | | |
|--|--|--|
| AS 2203.1: ETP-GMp-W629A.K2.H5;AWS A5.29: E91T1-K2 | | |

| Size (mm) | Weight (kg) | Part No. |
|-----------|-----------------|----------|
| 1.2 | 11.34 Readireel | ED017708 |
| 1.6 | 11.34 Readireel | ED017709 |

Outershield 690-H

For high strength steel grades like grade S690. Outstanding operator appeal. Exceptional mechanical properties (CVN >50J @ -40°C). Good wire feeding. Superior product consistency with optimal alloy control.

| Classifications | | |
|----------------------------|--|--|
| AWS.A5.29: E111T1-K3 MJ H4 | | |

| Size (mm) | Weight (kg) | Product No |
|-----------|-------------|------------|
| 1.2 | 15 | 942422 |
| 1.6 | 15 | 942828 |

Self Shielded FCAW Wire

Pipeliners NR-207

Primarily used for hot, fill and cap pass welding on cross-country pipelines. It is designed to produce weld deposits exceeding 490 MPa tensile strength with excellent low temperature impact properties.

| Classifications | | |
|---|--|--|
| AS 2203.1:ETP-GNn-W509A.Ni1.H15;AWS A5.29: E71T8-K6 | | |

| Size (mm) | Weight (kg) | Part No. |
|-----------|-------------|----------|
| 2.0 | 6.0* Coil | KC207206 |

*4 per box

Pipeliners NR-208P

Similar to NR-207-H, but with higher strength. Produces weld deposits exceeding 80,000psi yield strength with excellent low temperature impacts. Recommended for API Pipe Grade X80.

| Classification | | |
|----------------|--|--|
| AWS. E91T8-G | | |

| Size (mm) | Weight (kg) | Product No |
|-----------|-------------|------------|
| 2.0 | 6.0* | KC208206 |

*4 per box

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

TIG

Comweld CrMo 1

- Nominal 1.25% Cr 0.5% Mo steel TIG rod
- End stamped with AWS class 'ER80S-B2' for easy identification
- For the gas tungsten arc (TIG) welding of matching Cr-Mo creep resistant steels for elevated temperature and corrosive service

| Classifications |
|--|
| AS/NZS 1167.2: RB2 AWS/ASME-SFA A5.28: ER80S-B2 |

| Typical rod analysis (%) | | |
|--------------------------|-------------|----------|
| C: 0.09 | Mn: 0.60 | Si: 0.60 |
| Cr: 1.30 | Mo: 0.50 | P: 0.015 |
| S: 0.010 | Fe: Balance | |

| Recommended shielding gases |
|---|
| Argon Welding Grade Alushield® Light |

| Packaging data | | | |
|----------------|------------------------|-------------------|----------|
| Rod Size (mm) | Weight (kg), Pack type | Approx. (rods/kg) | Part No. |
| 2.4 x 1,000 | 5 kg cardboard tube* | 29 | 321379 |

*Resealable

Comweld CrMo 2

- Nominal 2.5% CR 1% Mo steel TIG rod
- End stamped with AWS class 'ER90S-B3' for easy identification
- For the gas tungsten arc (TIG) welding of Cr-Mo and Cr-Mo-V creep resistant steels for elevated temperature and corrosive service

| Classifications |
|--|
| AS/NZS 1167.2: RB3 AWS/ASME-SFA A5.28: ER90S-B3 |

| Typical rod analysis (%) | | |
|--------------------------|-------------|----------|
| C: 0.08 | Mn: 0.70 | Si: 0.60 |
| Cr: 2.50 | Mo: 1.00 | P: 0.015 |
| S: 0.010 | Fe: Balance | |

| Recommended shielding gases |
|-----------------------------|
| Argon Welding Grade |

| Packaging data | | | |
|----------------|------------------------|-------------------|----------|
| Rod Size (mm) | Weight (kg), Pack type | Approx. (rods/kg) | Part No. |
| 2.4 x 1,000 | 5 kg cardboard tube* | 29 | 321383 |

*Resealable

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz

Submerged Arc Wire

L-70

Special purpose 0.5% Mo electrode recommended for multiple pass welding with 860 flux on 480 MPa tensile (stress relieved) applications when the use of Mo is not restricted. Also suitable for single pass welding with Lincoln 700 series fluxes.

| |
|--------------------------------|
| Classification: |
| AS 1858.2: EA1; AWS A5.23: EA1 |

| Size (mm) | Weight (kg) | Part No. |
|-----------|---------------------|-----------|
| 2.0 | 30 Coil | KC702030 |
| 3.2 | 30 Coil | KC703230 |
| 4.0 | 27.2 Coil | ED012053 |
| 4.0 | 30 coil | KC704030 |
| 4.0 | 600 Bulk reel spool | KC7040600 |

LAC-B2

Alloy cored wire designed for welding chromium-molybdenum steels having 1.25% Cr – 0.5% Mo or less.

| |
|----------------------------------|
| Classifications |
| AS 1858.2: ECB2; AWS A5.23: ECB2 |

| Size (mm) | Weight (kg) | Part No. |
|-----------|-------------|----------|
| 2.4 | 22.68 Coil | ED010954 |
| 4.0 | 22.68 Coil | ED010955 |

LAC-M2

Alloy cored wire designed to weld steels requiring 690 MPa yield strength (as welded or stress relieved) and 20 J minimum Charpy V-notch at -45°C.

| |
|----------------------------------|
| Classifications |
| AS 1858.2: ECM2; AWS A5.23: ECM2 |

| Size (mm) | Weight (kg) | Part No. |
|-----------|-------------|----------|
| 2.4 | 22.68 Coil | ED010981 |
| 4.0 | 22.68 Coil | ED010982 |

LAC-Ni2

Alloy cored wire designed to weld weathering steels, 2.5% nickel steels, 3.5% nickel steels, and other steels requiring 480 MPa tensile strength (as welded or stress relieved) and excellent low temperature impact properties.

| |
|------------------------------------|
| Classifications |
| AS 1858.2: ECNi2; AWS A5.23: ECNi2 |

| Size (mm) | Weight (kg) | Part No. |
|-----------|-------------|----------|
| 2.4 | 22.68 Coil | ED010986 |

Submerged Arc Flux

Refer to page 491–492 for a listing of Submerged Arc Flux

WARNING Welding can give rise to electric shock, excessive noise, eye and skin burns due to the arc rays, and a potential health hazard if you breathe in the emitted fumes and gases. Read all the manufacturer's instructions to achieve the correct welding conditions and ask your employer for the Materials Safety Data Sheets. Refer to www.boc.com.au or www.boc.co.nz