

HYPER**ARC**™

SUPERIOR WELDING ELECTRODES



Unimig®

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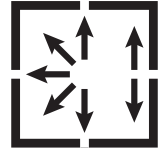
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HYPERARC™ 6013

6013 GENERAL PURPOSE ELECTRODE



SUMMARY

- ✓ All positional
- ✓ High penetration and easy direction
- ✓ Easy slag removal
- ✓ Easy arc striking



CLASSIFICATION

- ✓ AS/NZS 4855: B E4313A
- ✓ AWS A5.1: E6013

APPROVALS

- ✓ Lloyds Register of Shipping
- ✓ ABS

DESCRIPTION

The HYPERARC 6013 is a General Purpose Electrode suitable for welding all mild and low alloy steels in all positions. Easy slag removal and easy arc striking make the HYPERARC 6013 the right choice for multiple applications.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	350mm	50-90A
3.2mm	350mm	90-130A
4.0mm	350mm	110-170A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.08	0.39	0.29	0.023	0.01

TYPICAL MECHANICAL ANALYSIS

Yield Stress	454 MPa
Tensile Strength	535 MPa
Elongation	27%
Impact Test	53J @ 0°C

TYPICAL APPLICATIONS

- ✓ General mild steel fabrication work
- ✓ Repair work, fencing, gates, and balustrading
- ✓ Agricultural machinery
- ✓ Structural and general workshop use

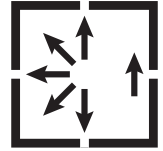
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63001
2.6mm	5kg	U63003
3.2mm	1kg (Handy Pack)	U63002
3.2mm	5kg	U63004
4.0mm	5kg	U63005

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HYPERARC 16TC™

7016 TWIN-COATED LOW-HYDROGEN ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter and easy releasing slag
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AS/NZS ISO 4855: B E4916 A U H10
- ✓ AWS A5.1: E7016

APPROVALS

- ✓ Lloyds Register of Shipping
- ✓ ABS
- ✓ DNV

DESCRIPTION

The HYPERARC 16TC is a Twin Coated 7016 Low Hydrogen electrode. With its all positional capabilities (except vertical down) it is the optimum choice when high quality welding is required.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	350mm	50-90A
3.2mm	350mm	80-130A
4.0mm	400mm	110-180A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.060	0.804	0.411	0.023	0.016



TYPICAL MECHANICAL ANALYSIS

Yield Stress	470 MPa
Tensile Strength	583 MPa
Elongation	29%
Impact Test	93J @ -20°C

TYPICAL APPLICATIONS

- ✓ Structural Steel Fabrication
- ✓ Pressure Vessel welding
- ✓ Pipe welding
- ✓ Repair work for Agriculture and machinery
- ✓ Earthmoving equipment repairs
- ✓ Layering, "Buttering"

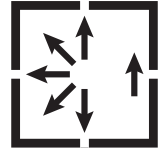
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63006
2.6mm	2kg (Vacuum Seal)	U63008
3.2mm	1kg (Handy Pack)	U63007
3.2mm	2kg (Vacuum Seal)	U63009
4.0mm	2kg (Vacuum Seal)	U63010

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HYPERARC™ 7018

7018 LOW HYDROGEN ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AS/NZS 4855: B E 4918 A U H10
- ✓ AWS/ASME SFA5.1: E7018

APPROVALS

- ✓ Lloyds Register of Shipping
- ✓ ABS
- ✓ DNV

DESCRIPTION

The HYPERARC 7018 is a Hydrogen controlled iron powder electrode. With its all positional capabilities (except vertical down) it is the ideal choice for high deposition welding.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	300mm	50-90A
3.2mm	350mm	80-130A
4.0mm	400mm	110-180A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.04	0.874	0.231	0.023	0.01



TYPICAL MECHANICAL ANALYSIS

Yield Stress	483 MPa
Tensile Strength	599 MPa
Elongation	28%
Impact Test	128J @ -40°C

TYPICAL APPLICATIONS

- ✓ Structural Steel Fabrication
- ✓ Pressure Vessel welding
- ✓ Repair work for Agriculture and mining machinery
- ✓ Ship building and repairs

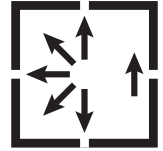
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	2kg (Vacuum Seal)	U63011
3.2mm	2kg (Vacuum Seal)	U63012
4.0mm	2kg (Vacuum Seal)	U63013

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HYPERARC™ 309L

309L STAINLESS STEEL ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AS/NZS 4854: ES309L-16
- ✓ AWS/ASME SFA5.4: E309L-16

DESCRIPTION

The HYPERARC 309L is a Stainless Steel Electrode specifically designed for welding 309 and 309L stainless steels as well as joining dissimilar metals such as mild steel to stainless steel. It is also used in joining dissimilar stainless steels in the 300 series.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	300mm	50-90A
3.2mm	350mm	85-120A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.044	0.925	0.737	0.033	0.021
Ni	Cr	Mo	Cu	
12.9	23.3	0.079	0.235	



TYPICAL MECHANICAL ANALYSIS

Yield Stress	480 MPa
Tensile Strength	560 MPa
Elongation	38%

TYPICAL APPLICATIONS

- ✓ Welding mild steels to stainless steels
- ✓ Buffering prior to hard facing
- ✓ Welding dissimilar 300 series stainless steels as well as some 400 series

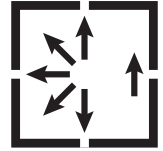
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	2kg (Vacuum Seal)	U63014
3.2mm	2kg (Vacuum Seal)	U63015

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HYPERARC™ 312L

312L STAINLESS STEEL ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AS/NZS 4854: ES312L-16
- ✓ AWS/ASME SFA5.4: E312-16

DESCRIPTION

The HYPERARC Dissimilar Metals 312L is a Stainless Steel electrode used for welding dissimilar or steels of unknown composition.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	300mm	60-80A
3.2mm	350mm	75-115A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.092	0.915	0.849	0.025	0.037
Ni	Cr	Mo	Cu	
9.9	29	0.052	0.2	



TYPICAL MECHANICAL ANALYSIS

Yield Stress	655 MPa
Tensile Strength	750 MPa
Elongation	23%

TYPICAL APPLICATIONS

- ✓ Welding mild steels to stainless steels
- ✓ Used for buffering prior to hard facing
- ✓ Repairs and Maintenance

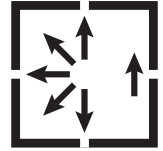
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63017
2.6mm	2kg (Vacuum Seal)	U63019
3.2mm	1kg (Handy Pack)	U63018
3.2mm	2kg (Vacuum Seal)	U63020

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HYPERARC™ 316L

316L STAINLESS STEEL ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AS/NZS 4854: ES316L-16
- ✓ AWS/ASME SFA5.4: E316L-16

DESCRIPTION

The HYPERARC Dissimilar Metals 312L is a Stainless Steel electrode used for welding dissimilar or steels of unknown composition.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	300mm	50-90A
3.2mm	350mm	70-110A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	P	S
0.024	0.856	0.84	0.037	0.012
Ni	Cr	Mo	Cu	
11.4	18.2	2.46	0.2	



TYPICAL MECHANICAL ANALYSIS

Yield Stress	502 MPa
Tensile Strength	645 MPa
Elongation	32%
Impact Test	63J @ -20°C

TYPICAL APPLICATIONS

- ✓ Stainless Steel fabrication
- ✓ Welding 300 series stainless steels
- ✓ Suitable to weld 301, 302, 303,304 and 304L

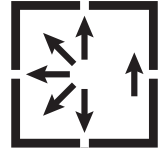
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63021
2.6mm	2kg (Vacuum Seal)	U63023
3.2mm	1kg (Handy Pack)	U63022
3.2mm	2kg (Vacuum Seal)	U63024

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HYPERARC™ NI 55

NI 55 CAST IRON ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AWS A5.15 : ENiFe-CI

DESCRIPTION

The HYPERARC Ni 55 is a Graphite coated Cast Iron electrode featuring 55% Nickel and 45% Iron.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	350mm	60-90A
3.2mm	350mm	80-120A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	Ni	Fe
0.39	0.55	0.82	55	Bal



TYPICAL MECHANICAL ANALYSIS

Tensile Strength 450 MPa

TYPICAL APPLICATIONS

- ✓ Suitable for repairing standard grades of Cast Iron
- ✓ Repairs to machinery and cast parts
- ✓ Repairing gears, pipes and machinery

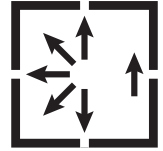
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63028
3.2mm	1kg (Handy Pack)	U63029

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HYPERARC™ NI 98

NI 98 CAST IRON ELECTRODE



SUMMARY

- ✓ Excellent arc stability
- ✓ High penetration
- ✓ Less spatter
- ✓ Concentrated arc

CLASSIFICATION

- ✓ AWS A5.15 : ENi-CI

DESCRIPTION

The HYPERARC Ni 98 is a Graphite coated Cast Iron electrode featuring 98% Nickel.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
2.6mm	350mm	50-80A
3.2mm	350mm	80-110A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	Ni	Fe
0.43	0.165	0.038	98	Bal



TYPICAL MECHANICAL ANALYSIS

Tensile Strength 350 MPa

TYPICAL APPLICATIONS

- ✓ Suitable for repairing standard grades of Cast Iron
- ✓ Repairs to machinery and cast parts
- ✓ Repairing engine blocks, housings, pulleys

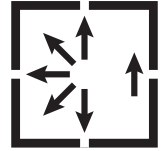
PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
2.6mm	1kg (Handy Pack)	U63026
3.2mm	1kg (Handy Pack)	U63027

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HYPERARC™ 531

531 HARD FACING ELECTRODE



SUMMARY

- ✓ Heavy abrasion, moderate impact
- ✓ Non machinable, grind only
- ✓ Easy strike and re strike

CLASSIFICATION

- ✓ DIN 8555/E 2-UM-55

DESCRIPTION

HYPERARC 531 Hard Facing Electrodes are a heavy abrasion moderate impact electrode. The hard facing layers the electrode produces have a very smooth finish and they are only machinable by grinding.

RECOMMENDED CURRENT

AC & DC+

OPERATING DATA

ELECTRODE SIZE (MM)	ELECTRODE LENGTH (MM)	CURRENT RANGE
3.2mm	350mm	90-140A

TYPICAL CHEMICAL COMPOSITION (%)

C	Mn	Si	Ni	Fe
0.56	0.98	1.10	0.031	Bal



TYPICAL MECHANICAL ANALYSIS

Hardness 54.0 HRc

TYPICAL APPLICATIONS

- ✓ Surfacing worn parts of civil engineering
- ✓ Surfacing heavy machinery
- ✓ Provide the hardness of 55-HRC
- ✓ Non-machinable

PACKAGING INFO

ELECTRODE SIZE (MM)	WEIGHT (KG)	SKU
3.2mm	1kg (Handy Pack)	U63025

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