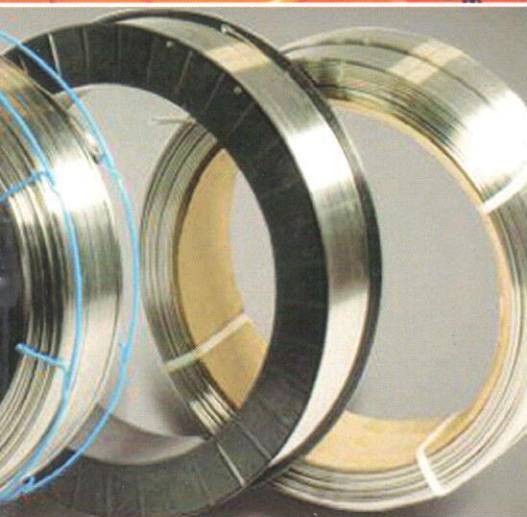
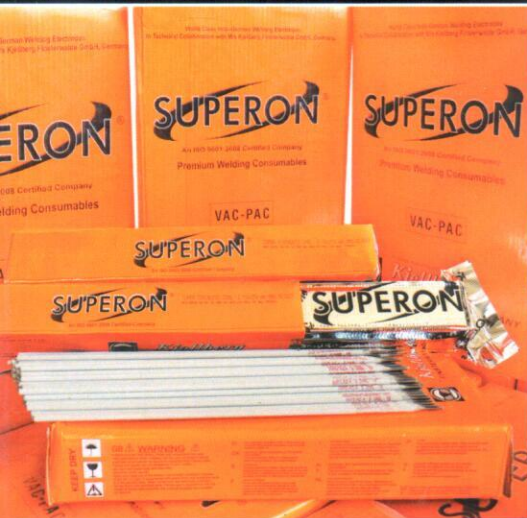


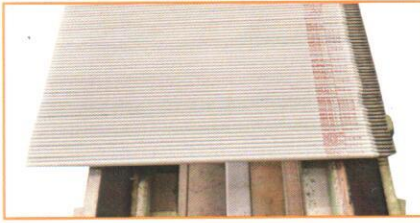
SUPERON[®]

"World Class Products"

WELDING ELECTRODES, WELDING WIRES & CLADDED WEAR PLATES



A) E 6010, E 6013, E 7018, E7018-1... Series



- ★ Full range. Multiple variants in E 6013 & E 7018 /E 7018-1, so as to suit different customer needs.
- ★ Excellent re-strike & other welding characteristics.
- ★ E 7018 /E 7018-1 : Ultra low diffusible hydrogen limits, <4ml /100gms of weld deposit.
- ★ Best in class mechanical properties.
- ★ Best in class packaging for minimum transit flux damage /breakage.

Product Name	Classification		Mechanical Properties Of Weld Metal (Typical)					Unique Feature
	AWS/SFA	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5(%)	Impact (J)	Welding Conditions		
1 SUPER OPTIMAL 6010	E 6010	≥380	450-550	≥24	≥47 at -30°C	DC(+)	Excellent all position electrode. Best suitable for pipes and pipelines welding. Excellent mechanical properties in class.	
2 SUPER OPTIMAL 6011	E 6011	≥380	450-550	≥24	≥47 at -30°C	AC;DC+	Excellent all position electrode. Best suitable for pipes and pipelines welding. Excellent mechanical properties in class.	
3 SUPER OPTIMAL 6013	E 6013	≥380	470-540	≥24	≥70 at 0°C	AC;DC±	Very soft arc, minimum spatter, smooth fine rippled radiographic weld bead. Superior slag detachability. Excellent impact notch toughness at 0°C.	
4 SUPER OPTIMAL 6013 VD	E 6013	≥380	470-540	≥24	≥60 at 0°C	AC;DC±	Rutile-Cellulosic exceptionally suitable for vertical down welding. Excellent gap bridging.	
5 SUPER OPTIMAL 6013 S	E 6013	≥420	480-540	≥24	≥60 at 0°C	AC;DC-	Ultra smooth weldability. Especially suited for thick section fillet joints. Excellent arc stability even at low currents.	
6 SUPER OPTIMAL 6013 SF	E 6013	≥450	480-540	≥24	≥60 at 0°C	AC;DC-	Ultra smooth weldability. Very smooth fusion with excellent slag detachability. Especially suited for thick section fillet joints. Excellent arc stability even at low currents.	
7 SUPER OPTIMAL 6013 M	E 6013	≥400	470-540	≥24	≥70 at 0°C	AC;DC±	Rutile medium coated, finely rippled smooth weld bead. Superior slag detachability. Excellent arc striking and restriking.	
8 SUPER OPTIMAL 6013 E	E 6013	≥350	450-510	≥24	≥55 at 0°C	AC;DC-	Rutile type suitable for all positions. Good arc striking and restriking. Radiographic quality weld deposit.	
9 SUPER OPTIMAL 7016	E 7016-H4	≥410	510-640	≥26	≥90 at -30°C	DC+;AC	Excellent weldability. Self peeling slag. Excellent mechanical properties.	
10 SUPER OPTIMAL 7016 S	E 7016-1-H4	≥450	550-640	≥30	≥70 at -45°C	DC+;AC	Ultra smooth finely rippled weld bead. Less than 4.0 ml diffusible hydrogen. Excellent impact notch toughness in class.	
11 SUPER OPTIMAL 7016-A1	E 7016-A1-H4	≥420	510-640	≥24	≥47 at -20°C	DC+;AC	Ultra smooth finely rippled weld bead. Less than 4.0 ml diffusible hydrogen. Excellent for C - 0.50% Mo Steels.	
12 SUPER OPTIMAL 7018*	E 7018-H4	≥450	550-620	≥28	≥80 at -30°C	AC;DC+	Excellent weldability. Best in class mechanical properties. Less than 4.0 ml diffusible hydrogen level.	
13 SUPER OPTIMAL 7018-G	E 7018 G-H4	≥400	510-650	≥24	≥70J at -60°C	AC;DC+	Excellent weldability. Tough and crack free joints.	
14 SUPER OPTIMAL 7018 S*	E 7018-1-H4	≥450	550-620	≥30	80 at -45°C	AC;DC+	Ultra smooth finely rippled weld bead. Less than 4.0 ml diffusible hydrogen level.	
15 SUPER OPTIMAL 7018-A1	E 7018-A1-H4	≥450	520-620	≥26	120J at -20°C	AC;DC+	Excellent weldability. Best suited positional welding. Excellent creep resistant.	
16 SUPER OPTIMAL 8018-G	E 8018-G	≥460	560-680	≥30	>47 at -50°C	AC;DC+	Excellent toughness and formability. Highly crack resistant joint welding.	
17 SUPER OPTIMAL 8018-B2	E 8018-B2	≥460	550-650	≥20	>47 at +20°C	AC;DC+	Ultra smooth finely rippled bead. Best in class mechanical properties.	
18 SUPER OPTIMAL 9018-B3	E 9018-B3	≥550	620-750	≥20	>47 at +20°C	AC;DC+	Excellent weldability and mechanical properties.	
19 SUPER OPTIMAL 9018-G	E 9018-G	≥550	620-720	≥20	≥47J at -50°C	AC;DC+	Excellent weldability extra low hydrogen, self peeling slag, best in class mechanical properties.	
20 SUPER OPTIMAL 9018-M	E 9018-M H4	540-620	650-700	≥26	≥47J at -50°C	AC;DC+	Extra Low hydrogen. Tough and crack free welded joints. Excellent mechanical properties.	

21	SUPER OPTIMAL 10018-D2	E 10018-D2-H4	≥630	700-850	≥22	40 at -50°C	AC;DC+	Smooth finely rippled weld bead. Excellent impact notch toughness at -50°C. Recommended for critical security welding applications.
22	SUPER OPTIMAL 10018-G	E 10018-G-H4	≥680	760-850	≥18	≥47 at -50°C	AC;DC+	Superior weldability, concentrated arc, smooth weld bead, self releasing slag.
23	SUPER OPTIMAL 11018-G	E 11018-G-H4	≥720	≥780	≥16	≥27 at -51°C	AC;DC+	Superior weldability, concentrated smooth arc, all positions, crack free joints.
24	SUPER OPTIMAL 11018-M	E 11018-M-H4	>730	775-850	≥20	≥47 at -50°C	AC;DC+	Excellent weldability. Best in class mechanical properties.

B) Stainless Steel Welding Electrodes



Electrodes

- ★ Perfect **FULL LENGTH** welding
- ★ Self releasing slag
- ★ Low moisture absorption
- ★ Perfect re-striking
- ★ Best in class welding & packaging

MIG /TIG Wires

- ★ Warranted Chemistry
- ★ Superior Cast & Helix Control
- ★ Superior Feedability
- ★ Superior Cleanliness
- ★ Superior Packaging

Product Name	Classification	Mechanical Properties Of Weld Metal (Typical)					Welding Conditions	Unique Feature (All Vacuum Packed)
		AWS/SFA	Yield Strength N/mm ²	Tensile Strength N/mm ²	Elongation A5(%)	Impact (J)		
25 SUPER OPTIMAL 307	E 307L-16	-	-	≥600	≥35	≥75 at RT	AC;DC+	Austenitic structure, rutile type, excellent weldability. Excellent machinability.
26 SUPER OPTIMAL 308H	E 308H-16	-	-	600	37	≥55 at RT	AC;DC+	Smooth weldability. Suitable for high temperature applications.
27 SUPER OPTIMAL 308L-15	E 308L-15	-	-	≥550	≥40	≥47 at -196°C	DC+	Superior weldability, self peeling slag best suitable for pipe welding. Impact passes at -196°C.
28 SUPER OPTIMAL 308L*	E 308L-16	-	-	610	44	60 at RT	AC;DC+	LMA type coating, superior weldability without spatter, self peeling slag. Best in class mechanical properties.
29 SUPER OPTIMAL 309Cb	E 309Cb-16	-	-	590	40	75 at RT	AC;DC+	Excellent resistance to chemical corrosion and heat. Weldability with spatter free arc, self-releasing slag.
30 SUPER OPTIMAL 309L*	E 309L-16	-	-	600	≥35	60 at RT	AC;DC+	Excellent weldability, self peeling slag. Best in class mechanical properties. Best for joining dissimilar steels.
31 SUPER OPTIMAL 309L-15	E 309L-15	-	-	≥550	≥30	60 at RT	DC+	Excellent weldability. Best in class mechanical properties.
32 SUPER OPTIMAL 309LMO	E 309LMO-16	-	-	600	35	65 at RT	AC;DC+	Highly crack resistant. Soft fusion, nice aspect of the bead, slag lifts by itself
33 SUPER OPTIMAL 310	E 310-16	-	-	620	35	75 at RT	AC;DC+	Austenitic structure, rutile type, excellent weldability.
34 SUPER OPTIMAL 312*	E 312-16	-	>500	>800	>20	70 at RT	AC;DC+	Superior weldability. Excellent crack, heat and shock resistant, highest tensile strength with elongation in class.
35 SUPER OPTIMAL 316L*	E 316L-16	-	-	>590	≥35	60 at RT	AC;DC+	Superior weldability, finely rippled bead, self peeling slag. Best in class corrosion resistant.
36 SUPER OPTIMAL 316L-15	E 316L-15	-	-	570	40	≥50 at -60°C	DC+	Superior weldability, self peeling slag, controlled fluidity, best for all position welding. Impact passes at -196°C.
37 SUPER OPTIMAL 317L	E 317L-16	-	>400	590	36	50 at RT	AC;DC+	Excellent weldability. Smooth arc, finely rippled weld bead, self releasing slag.
38 SUPER OPTIMAL 318-16	E 318-16	-	450	590	35	65 at +20°C	AC;DC+	Excellent intergranular corrosion resistant, good weldability, self peeling slag.
39 SUPER OPTIMAL 347	E 347-16	-	-	590	40	60 at RT	AC;DC+	Soft fusion, without spatters, very easy slag removal, exceptional weld bead



SUPERON SCHWEISSTECHNIK (I) LTD.



Superon Schweisstechnik India Ltd. was established in the year 1994.

A full range of welding consumables - fabrication, stainless steel, low-heat input repair & reclamation welding electrodes, flux cored wires & clad wear plates are being manufactured.

Technical Collaborators



- ★ Premium quality features.
- ★ World class performance, matching /exceeding best in the world.
- ★ Wide range.
- ★ Customer base in over 35 countries.



Corporate Office



Plant-II, Manesar



Plant-III, Gurgaon



Plant-IV, Gurgaon



Electrode Production



Stainless Steel Wire Drawing Lines



Stainless Steel MIG Wire Lines



Stainless Steel Fine Wire



Stainless Steel Fine Wire



Multi-Alloy Spectro



FCAW Line



Cladded Wear Plates Line

Wide Range of Approvals

International:



National:



BHARAT PETROLEUM CORP. LTD.



40	SUPER OPTIMAL 347-15	E 347-15	-	590	40	≥47 at -60°C	DC+	Controlled fluidity, superior weldability, self peeling slag, superior intergranular corrosion resistant.
41	SUPER OPTIMAL 385	E 385-16	>370	>570	>35	≥70 at +20°C	AC;DC+	Fully austenitic, highly corrosion resistant. Good weldability in all positions, except vertical down.
42	SUPER OPTIMAL 2209-16*	E 2209-16	>500	>700	>25	≥47 at -40°C	AC;DC+	Corrosive resistant duplex-steels. Excellent resistant to intergranular corrosion, pitting and stress corrosion conditions.
43	SUPER OPTIMAL 2594-16*	E 2594-16	>650	>800	>20	≥47 RT	AC;DC+	Super-duplex stainless steels. Excellent resistant to pitting and crevice corrosion. Excellent weldability, spatter free arc, very smooth bead appearance.
44	SUPER OPTIMAL 410	E 410-15	≥250	≥520	≥22	-	AC;DC+	Heavy coated low hydrogen type. Excellent weldability.
45	SUPER OPTIMAL 410NiMo	E 410NiMo-15	≥600	≥850	≥15	-	DC+	Basic coated. Superior weldability. Excellent resistance to abrasion.

* -17 designation are also available.

C) Hardfacing, Cast Iron & Nickel Alloys



Product Name	Classification	Mechanical Properties Of Weld Metal (Typical)					Unique Feature (All Vacuum Packed)
	AWS/SFA	Yield Strength N/mm2	Tensile Strength N/mm2	Elongation A5(%)	Impact (J)	Welding Conditions	
46 SUPER OPTIMAL 35RC	DIN 8555: E1-UM-350	-	-	-	-	AC;DC+	Hardness : 37-40 HRc Rutile type.
47 SUPER OPTIMAL MN	DIN 8555: ~E7-UM-200KP	-	-	-	-	AC;DC+	Heavy basic coated austenitic manganese alloyed electrode. Hardness (as welded) : 180-220(BHN) Hardness (work condition) : 400-450(BHN)
48 SUPER OPTIMAL 55RC	DIN 8555: E6-UM-60P	-	-	-	-	AC;DC+	Hardness : 57-60 HRc Rutile type.
49 SUPER OPTIMAL 55LH	DIN 8555: E6-UM-60P	-	-	-	-	AC;DC+	Hardness : 57-60 HRc Basic coated.
50 SUPER OPTIMAL 60RC	DIN 8555: E6-UM-60-S	-	-	-	-	AC;DC+	Hardness : 58-60 HRc Rutile type.
51 SUPER CAST NiFe	E NiFe-C1	300-400	400-550	≥15	-	AC;DC+	Graphite basic coated. Ferro-Nickel alloy. Good bonding and flow of the weld metal. Good machinability.
52 SUPER CAST ULTIMA	E Ni-CI	260-410	300-450	≥3	-	AC;DC+	Excellent machinability. Pure nickel electrode. Smooth and intensive arc. Easy slag removal.
53 SUPER OPTIMAL NiCu7	E Ni-Cu-7	230	490	32	-	DC+	Universal monel repairing, joining, problem solver. Weld metal corrosion resistant to sea water, salts and reducing acids.
54 SUPER OPTIMAL NiCrFe-2	E NiCr Fe-2	>400	>600	40	≥47 at -196°C	DC+	Excellent out of position welding. Excellent corrosion resistant even at elevated temperatures.
55 SUPER OPTIMAL NiCrFe-3	E NiCr Fe-3	>420	>700	43	≥47 at -196°C	DC+	Excellent out of position welding. Excellent corrosion resistant at normal elevated temperatures.
56 SUPER OPTIMAL NiCrMo-3	E NiCr Mo-3	>420	>760	>30	90 at -196°C	AC;DC+	Superior weldability. Fully austenitic, excellent resistance against corrosive media.

D) E 70(S) & E 71-T1 Welding Wires

57	SUPER MIG 70(S)	ER 70 S-6	≥420	500-640	≥24	≥47 at -30°C	DC(+)
58	SUPER FC 71-T1	E 71 T-1	≥430	500-660	≥24	≥27	DC(+)



E) Stainless Steel Welding Wires

Stainless Steel MIG Wires

Superon manufactures high quality stainless steel MIG welding wires in bright as well as in matte finish with specially designed cleaning operation to avoid welding contamination & trouble free feeding. Super MIG welding wire comes in plastic & in metal basket spool as per the different weight requirement by customers. The wires tensile strength, helix and cast diameter is engineered to precise tolerance to ensure perfect "Pay-Off".



Stainless Steel TIG Wires

Superon manufactures high quality stainless steel TIG welding wires in 36" & 1,000 mm cut lengths, with embossing on one or both sides above 1.2 mm wires as per customer's requirements. TIG welding wires are supplied in bright and clean finish to avoid all possible contamination.

Drum Packing

Superon also manufactures stainless steel MIG welding wires in bulk supplies, which comes with 100 to 250 Kgs (250 to 500 Lbs) fibre / card board drums for robotic as well as for general applications. Our pail pack drums equipped with all required facilities for robotic uses & can be utilized on any wire feeding unit without changing much expensive equipments. Our pail pack drum also increases productivity by reducing down times as compared with small plastic spools. Cast & helix of our pail pack drums are engineered in such a manner that it reduces wastage of wires & increase life of liner tips.



100 Kgs Drum 250 Kgs Drum
250 Lbs Drum 500 Lbs Drum



25 Kgs, 60 Lbs

Stainless Steel SAW Wires

Superon manufactures clean & layer wound wire for submerged arc welding from 1.60 mm (0.0625") to 5.00 mm (0.1875") in various grades in bright as well as in matte finish. The tensile strength, helix and cast diameter is engineered to precise tolerance to ensure perfect "Pay-Off".

F) OA Flux Cored Wires

Product Name	Alloy Base	Hardness (Typical)	Unique Features	Key Application
IMPACT RESISTANT (MACHINABLE)				
1 SUPER STANHARD OA 32	Si, Mn, Cr, Mo	280- 325 BHN	Self-shielded open arc continuous wire with high resistance to friction and compression, suitable for multilayer build-up. Excellent machinability and resist deformation.	Drive sprockets, gear teeth, crane wheels, gear and rail links. Very much suitable for a semi hard and machinable deposit for rebuilding and surfacing.
2 SUPER STANHARD OA 40	Si, Mn, Cr, Ni	As deposited 180-200 BHN After work-hardened 450-BHN	Self-shielded open arc continuous wire with high resistance to impact and compression, suitable for joining and hard surfacing. Fully austenitic weld deposit having good impact, spalling & galling resistant. Excellent crack resistivity.	Heavy earth moving equipments and shovels, dozer blades, impactor arms, impactor, wobblers hammers, crushers. Can also be used on forged /alloyed sprockets, crusher mantle. coke crushers etc.

F) OA Flux Cored Wires

Product Name	Alloy Base	Hardness (Typical)	Unique Features	Key Application	
WORK HARDENING, AUSTENITIC HARDFACING					
3	SUPER STANHARD OA 44	C, Si, Mn, Cr, Ni	As deposited 200-230 BHN After work-hardened 450-BHN	Self-shielded open arc continuous wire with high resistance to impact and compression, suitable for build-up and hard surfacing. Welding of parts made out of manganese steel, and the deposit is non-magnetic which is tough and crack-free.	Heavy earth moving equipments and shovels, dozer blades, impactor arms, impactor, wobblers, hammers, bucket teeth & lips, crushers & crusher jaws.
4	SUPER STANHARD OA 70	C, Si, Cr, Mo	57-60 HRc	Open arc self-shielded flux cored wire for severe wear by fine particle abrasion or erosion under moderate impact & temperature upto 450°C. Deposits are grind finishable. For heavier build ups use Super Stanhard OA 40 as a base/build up layer.	Pulverising roller segments & tyre segments of coal, limestone & clinkers mills. For wear protection of steel components, quarry and dredging industry. Pug mill augers, screws, blades and scrapers, draft fans, drag chains, press screws and conveyors etc.
5	SUPER STANHARD OA 71	C, Si, Cr, Mn	57-60 HRc	Open arc self-shielded flux cored wire for severe abrasion, corrosion, combined with moderate impact. The weld deposit having high percentage of carbides and a acquire high polish in service & reduces friction.	Crusher parts, conveyor screws, mantles, mill guides, agitators, mixer blades, dozer blades, bucket teeth, mill hammer, wear plates etc.
6	SUPER STANHARD OA 72	C, Cr, Nb, B	62- 65 HRc	Open arc self-shielded flux cored with excellent resistance to grinding abrasion and moderate impact. Complex carbide hardness achieved on single layer. Deposits are smooth, flat & grind finishable. For heavier build ups use Super Stanhard OA 40 as a base/build up layer.	Exhaust fans, buckets, track pads, lip plates, teeth points, scrapers, dozers blades, pug mill augers and segments, press screw heads, humidifier paddles and segments, mixer blades and scrapers, fan blades etc.
7	SUPER STANHARD OA 76	C, Cr, Mo, Nb V, W, B	63- 65 HRc	Open arc self-shielded flux cored wire with high complex carbides for severe abrasive & erosive wear at elevated temperatures. Deposits are smooth, hard & flat requiring less finishing and temperature resistant upto 650°C.	Sinter handling equipment's, sinter star, knife bars, coke pusher shoes, clinker conveyor chains, hot slag buckets, augers, clinker breaker hammers, blast furnace bells, etc....



G) Cladded Wear Plates

Products	Typical Application Condition	Hardness Range	Temp Range	Carbides
STANPLATE 55	Abrasion / Mild Impact	56-58 HRc	250°C	Cr-C
STANPLATE 56	Severe Abrasion / Mild Impact	60-63 HRc	250°C	Cr-C
STANPLATE 70	Severe Abrasion & Erosion / Mild Impact	56-59 HRc	600°C	Complex Carbides
STAN-E-PLATE 55	Abrasion / Mild Impact	56-58 HRc	250°C	Cr-C
STAN-E-PLATE 56	Severe Abrasion / Mild Impact	60-63 HRc	250°C	Cr-C

