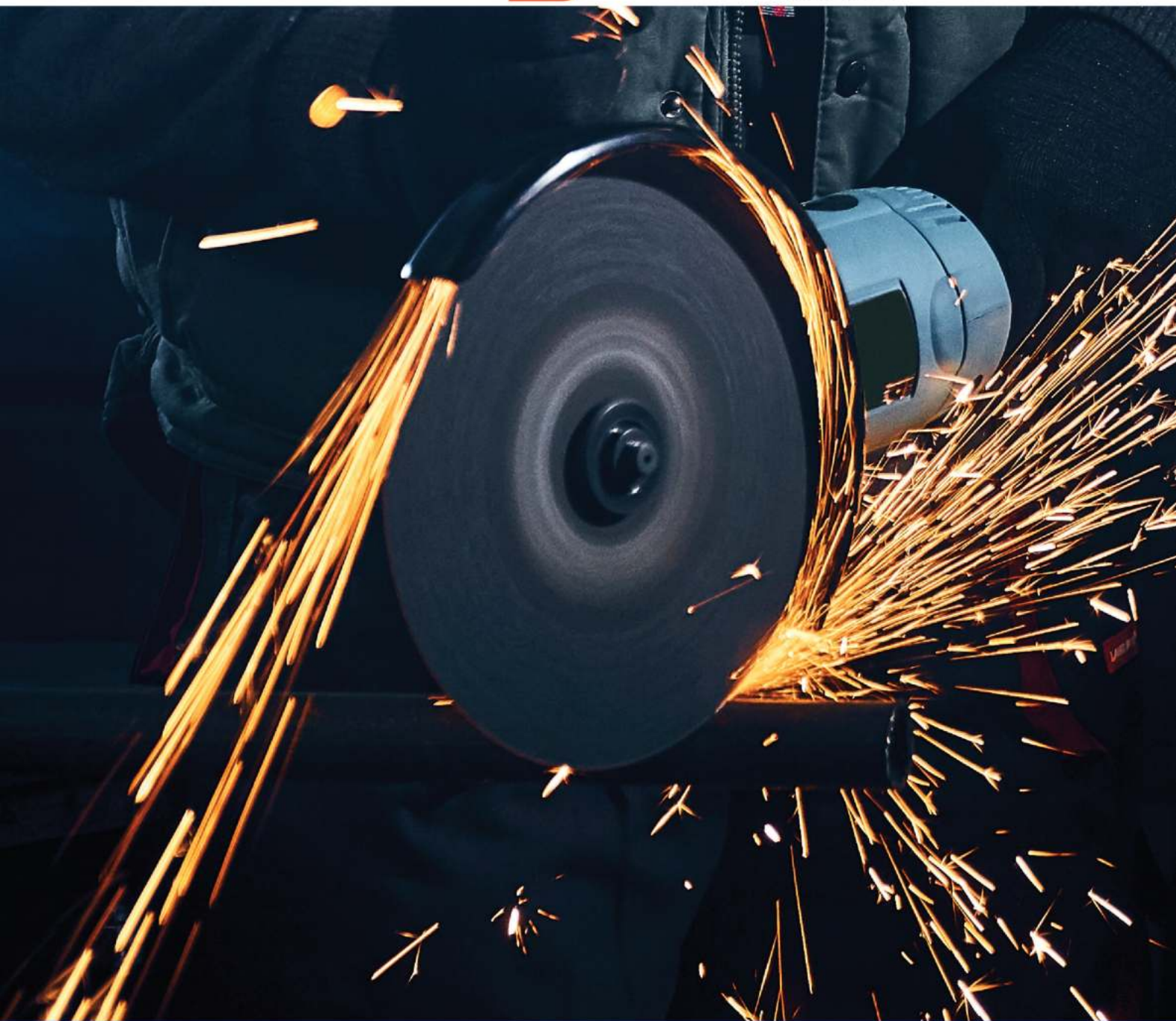


Mangalam[®]
Since 1992



ABRASIVES & ELECTRODES

CATALOGUE 2024

PROFILE

Established in the year 1992, Malu Electrodes Pvt. Ltd (MEPL) is an ISO 9001:2008 certified company, engaged in Manufacturing, Exporting & Trading of Welding Electrodes, Wires, and Abrasives. The Company has been manufacturing & trading under the brand name of "MANGALAM".

Having achieved an experience of over 33 years in the Welding and Cutting Industry, and looking at the Growth of Indian Economy, Mangalam has diversified into the Abrasives Industry by introducing products such as Cutting Wheels, GC Wheels, DC Wheels, Flap Discs and many more products. All of the products are of Superior Quality having High Performance.

Mangalam has 5 different manufacturing sites across India to cater different markets. Mangalam also has the largest dealer network spread over 20 states across India. This enables us to serve our customers better and faster.

Globally the company has exported its product to African, Gulf and South American Countries. We have created a distinct niche for us in the global markets also by confirming our products to high standards in quality & specifications. Our efforts in developing the best quality products have been rewarded through the ISO 9001:2008 certification.

Our customer centric focus has resulted in products and services exceeding customer expectations. To continue delighting customers, we strive to continuously upgrade the quality of our products and service.

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CUT OFF WHEEL

- Premium quality Aluminium Oxide grains reinforced by Fiberglass net.
- Designed for cutting Stainless Steel, Mild Steel, Cast Iron and other Metals.
- Thin wheels with exceptional Safety margins.
- Available in Single net and Double net variants.
- Guaranteed Sharpness, Longer Life, Faster Cutting.
- Less stress on workpiece material reducing Burr, Noise and Vibration.



MANGALAM

GREEN M7



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M7	32301	107 X 1.5 X 16	GREEN	1 NET	80M/S	15200	800
M7	32316	125 x 1.5 x 22	GREEN	1 NET	80M/S	12200	400
M7	32317	180 x 1.8 x 22	GREEN	1 NET	80M/S	8500	200
M7	32302	355 X 2.8 X 25.4	GREEN	1 NET	80M/S	4400	40

MANGALAM

GREEN M2



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M2	32303	107 X 1.3 X 16	GREEN	2 NET	80M/S	15200	800
M2	32305	125 X 1.2 X 22	GREEN	2 NET	80M/S		
M2	32307	355 X 2.8 X 25.4	GREEN	2 NET	80M/S	4400	40

MANGALAM

GREEN M1



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M1	32304	355 X 2.8 X 25.4	GREEN	1 NET	80M/S	4400	40

MANGALAM

GREEN M8

GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M8	32305	355 X 2.8 X 25.4	GREEN	2 NET	80M/S	4400	

MANGALAM

BROWN M10



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M10	32308	107 X 1.4 X 16	BROWN	2 NET	80M/S	15200	800
M10	32309	125 X 1.4 X 22	BROWN	2 NET	80M/S	12200	400
M10	32310	180 X 2 X 22	BROWN	2 NET	80M/S	8500	200
M10	32306	355 X 2.8 X 25.4	BROWN	2 NET	80M/S	4400	40

MANGALAM

BLACK + RED M11



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M11	32312	107 x 1.5 x 16	BLACK+RED	2 NET	80M/S	15200	800
M11	32319	125 x 1.25 x 22	BLACK+RED	2 NET	80M/S	12200	400
M11	32325	107 x 1.5 x 16	RED	2 NET	80M/S	15200	

MANGALAM

BLACK M9



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M9	32314	107	BLACK	2 NET	80M/S		
M9	32318	125 x 1.25 x 22	BLACK	2 NET	80M/S	12200	400
M9	32315	180 x 1.8 x 22	BLACK	2 NET	80M/S	8500	200

MANGALAM

BLACK M6



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M6	32311	355 X 2.5 X 25.4	BLACK	1 NET	80M/S	4400	40

GC WHEEL

- Flexible Grinding Wheels made using High Quality Silicon Carbide
- Designed for all kinds of Stone and Glass.
- Ensures High Endurance, Minor Maintenance and a well defined Grinding Experience.



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M12	73001	103 X 2.8 X 16	BLACK	#46	80M/S	15200	320
M12	73002	103 X 2.8 X 16	BLACK	#60	80M/S	15200	320
M12	73003	103 X 2.8 X 16	BLACK	#80	80M/S	15200	320
M12	73004	103 X 2.8 X 16	BLACK	#120	80M/S	15200	320



DC WHEEL

- Superior Quality Raw Material ensures High Performance and Endurance.
- Suitable for Stainless Steel, Mild steel, Cast iron and Alloys.
- Apt for well defined Grinding, Deburring, Weld leveling, Chamfering and Grooving.



MANGALAM

BLACK M6



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M6	43001	100 x 6 x 16	BLACK	2.5 NET	80M/S	15200	200
M6	43002	125 x 6 x 16	BLACK	2 NET	80M/S	12200	100
M6	43006	180 X 6 X 16	BLACK	2.5 NET	80M/S	8500	

MANGALAM

GREEN M7



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M7	43003	100 x 6 x 16	GREEN	2 NET	80M/S	15200	200
M7	43004	100 x 4 x 16	GREEN	1.5 NET	80M/S	15200	300
M7	43005	125 X 6 X 22	GREEN	2.5 NET	80M/S	12200	100

MANGALAM

BROWN M10



GRADE	SKU	SIZE	COLOUR	TYPE	SPEED	RPM	UNIT (MASTER CARTON)
M10	43007	100 X 6 X 16	BROWN	2.5 NET	80M/S	15200	200

FLAP DISC

- Finest quality grains bonded to cloth emery to form a High Performance Flap Disc.
- Suitable for Deburring, Rust removal and Snagging.
- Excellent for Surface Finishing, Grinding and Polishing of Stainless Steel and Metal.
- Available in multiple Grit sizes, with Plastic and Fiberglass backing.

MANGALAM

BLACK M16



GRADE	SKU	SIZE	COLOUR	GRIT	RPM	UNIT (MASTER CARTON)
M16	64001	4"	BLACK	#60 PLASTIC	15200	200
M16	64002	4"	BLACK	#80 PLASTIC	15200	200
M16	64003	4"	BLACK	#60 FIBERGLASS	15200	200
M16	64004	4"	BLACK	#80 FIBERGLASS	15200	200
M16	64005	4"	BLACK	#120 FIBERGLASS	15200	200
M16	64010	5"	BLACK	#60 FIBERGLASS	15200	200
M16	64011	5"	BLACK	#80 FIBERGLASS	15200	200
M16	64014	5"	BLACK	#60 PLASTIC	15200	200
M16	64015	5"	BLACK	#80 PLASTIC	15200	200



NON WOVEN WHEEL

MANGALAM

MAROON M20

GRADE	SKU	SIZE	COLOUR	TYPE	UNIT (MASTER CARTON)
M20	42303	100x13x16	MAROON	U3	200
M20	42305	100x13x16	MAROON	U5	200
M20	42310		MAROON		200

FELT WHEEL

MANGALAM

WHITE M24

GRADE	SKU	SIZE	COLOUR	TYPE	UNIT (MASTER CARTON)
M24	62301	100x13x16	WHITE		200

WA WHEEL

MANGALAM

M27

GRADE	SKU	SIZE	COLOUR	TYPE	UNIT (MASTER CARTON)
M27	23101	100x2.5x16		#36	200
M27	23102	100x2.5x16		#60	200
M27	23103	100x2.5x16		#80	200

M.S ELECTRODES



M.S ELECTRODES

SR. NO.	NAME AWS/SFA5.1 IS: 814	DESCRIPTION & APPLICATION	WELDMETAL CHEMISTRY %
01	Mangalam® E6013 ER4211X	All position medium coated rutile electrode with excellent usability characteristics for producing radiographic quality welds. Can be used for pipes & Tubes up to 12 mm thickness.	Carbon :0.10 Max Manganese :0.65 Max Silicon :0.40 Max Sulphur :0.040 Max Phosphorous :0.040 Max
02	HIGH TIDE® E6013 ER4211	All position medium coated rutile electrode with excellent usability characteristics for producing radiographic quality welds. Can be used for pipes & Tubes up to 12 mm thickness.	Carbon :0.10 Max Manganese :0.65 Max Silicon :0.40 Max Sulphur :0.040 Max Phosphorous :0.040 Max
03	Mangalam® E7016 EB5426H3X	Basic coated low hydrogen electrode giving radiographic quality for joining high thickness joints subjected to restraint. Suitable for pipe welding application. Metal Recovery around 100%.	Carbon :0.07 Manganese :1.20 Silicon :0.30 Max Sulphur :0.02 Max Phosphorous :0.02 Max
04	Mangalam® E7018 EB5426H3JX	Basic coated low hydrogen iron powder all position electrode for giving radiographic quality welds subjected to restraint. Resists hot & cold cracking. weld is strong, ductile & tough. Suitable for components subjected to dynamic loading. Can be used for pressure parts particularly in thermal plants. Metal recovery 115%.	Carbon :0.12 Max Manganese :1.60 Max Silicon :0.75 Max Sulphur :0.035 Max Phosphorous :0.035 Max
05	Mangalam® E7018-1 EB5629H3JX	Basic coated low hydrogen iron powder all position electrode for giving radiographic quality welds resistant to hot & cold cracking. Weld is strong, ductile & tough down to -45 0C. Suit able for components subjected to dynamic loading & pressure parts.	Carbon :0.10 Max Manganese :1.40 Silicon :0.50 Max Sulphur :0.03 Max Phosphorous :0.08 Max

M.S ELECTRODES

MECHANICAL PROPERTIES	CURRENT (amp)	SIZE	CURRENT (amp)	PACKING SPECIFICATIONS	
				Pieces Per Pack	Pieces Per Carton
Yield strength :330 N/mm2 Min Ultimate tensile strength :410 N/mm2 Min Elongation :22% Min. CVN impact at 0°C :47 Joules Min.	AC/DC (+/-)	2.50 x 350	80-110	125	1000
		3.15 x 350/450	90-130	90	720
		4.00 x 450	140-190	60	480
		5.00 x 450	170-230	40	320
Yield strength :330 N/mm2 Min Ultimate tensile strength :410 N/mm2 Min Elongation :22% Min. CVN impact at 0°C :47 Joules Min.	AC/DC (+/-)	2.50 x 350	80-110	125	1000
		3.15 x 350	90-130	90	720
		4.00 x 450	140-190	60	480
		5.00 x 450	170-230	40	320
Yield strength :480 N/mm2 Min Ultimate tensile strength :550 N/mm2 Min Elongation :26% CVN impact at 0°C :60J (-30°C)	AC/DC (+)	2.50 x 350	60-90	180	720
		3.15 x 450	100-140	130	520
		4.00 x 450	140-180	85	340
		5.00 x 450	190-250	50	200
Yield strength :360 N/mm2 Min Ultimate tensile strength :510 N/mm2 Min Elongation :20% CVN impact at 0°C :27J (-30°C)	AC/DC (+)	2.50 x 350/450	80-100	150	600
		3.15 x 350/450	110-130	100	400
		4.00 x 450	150-200	70	280
		5.00 x 450	190-250	45	180
Yield strength :490 N/mm2 Min Ultimate tensile strength :550 N/mm2 Min Elongation :27% CVN impact at 0°C :80J (-)45°C	AC/DC (+)	2.50 x 350	80-110	150	600
		3.15 x 450	100-135	100	400
		4.00 x 450	140-180	70	280
		5.00 x 450	180-250	45	180

M.S ELECTRODES

SR. NO.	NAME AWS/SFA5.1 IS: 814	DESCRIPTION & APPLICATION	WELDMETAL CHEMISTRY %
06	Mangalam® SS E6013 ER4222X	A heavy coated all position rutile electrode for depositing heavier welds. Would be useful for application where slower cooling rates are required.	Carbon :0.07 Max Manganese :0.35 Silicon :0.25 Max Sulphur :0.03 Max Phosphorous :0.03 Max
07	Mangalam® SUPREME E6013 ER4212X	A medium coated all position rutile electrode suitable for major structural works. Would be useful for application where radiographic quality is required.	Carbon :0.07 Max Manganese :0.35 Silicon :0.25 Max Sulphur :0.03 Max Phosphorous :0.03 Max
08	Mangalam® VD 6013 E 6013 ER4211X	A Rutile coated all position electrode particularly designed for vertical down welding. Ideally suited for fillet welds in vertical down position and Tee joints.	Carbon :0.07 Max Manganese :1.20 Silicon :0.30 Max Sulphur :0.02 Max Phosphorous :0.02 Max
09	Mangalam® CUTRODE	Used for cutting / Piercing Steel Plate. Gives a forceful arc that shears base material.	

MANGALAM CAST IRON ELECTRODES

SR. NO.	TYPE	APPLICATION
01	Mangalam® CAST IRON ELECTRODES	Mangalam Cast Iron electrode is all position cast iron electrodes depositing air hardening type for non machinable cast iron and joining mild steel and low alloy steels where 160-250 BHN Hard- ness is required. Welds are normally non machinable, crack resis- tant and free from porosity. Repairing of foundry defects, rusted parts etc for economy welding of seal castings, sealing of cracks in castings.

M.S ELECTRODES

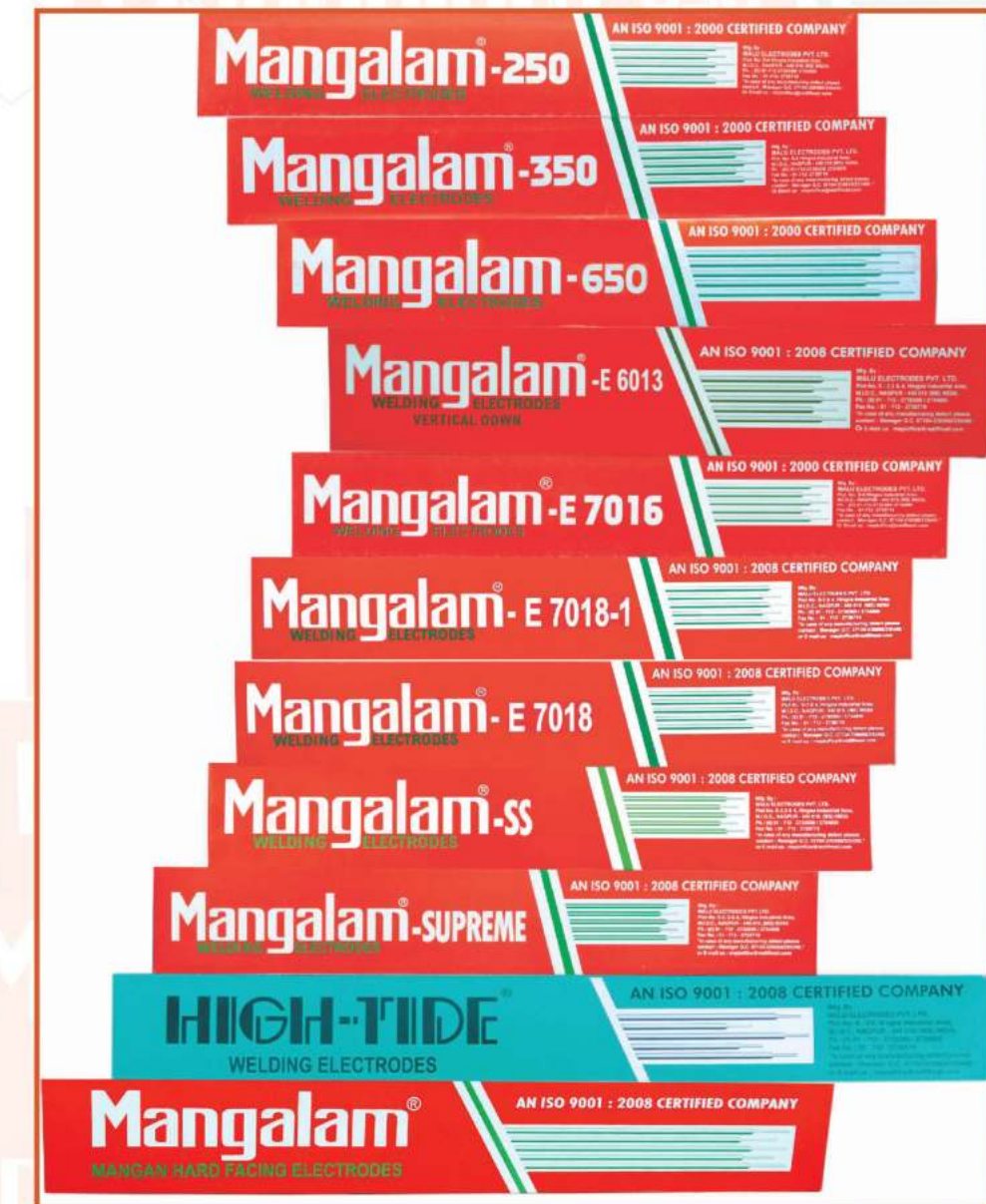
MECHANICAL PROPERTIES	CURRENT (amp)	SIZE	CURRENT (amp)	PACKING SPECIFICATIONS	
				Pieces Per Pack	Pieces Per Carton
Yield strength :430 N/mm ² Ultimate tensile strength :500N/mm ² Elongation :24% CVN impact at 0°C :60 J at (+)27°C Min.	DC (-)	2.50 x 350	60-90	175	700
		3.15 x 350/450	100-140	105	
		4.00 x 450	140-190	65	420
		5.00 x 450	190-250	40	260
				40	160
Yield strength :430 N/mm ² Ultimate tensile strength :500 N/mm ² Elongation :24% CVN impact at 0°C :60 J at (+)27°C Min.	DC (-)	2.50 x 350	60-90	225	900
		3.15 x 350	90-130	130	520
		3.15 x 450	100-140	130	520
		4.00 x 450	140-190	85	340
		5.00 x 450	190-250	55	220
Yield strength :480 N/mm ² Ultimate tensile strength :550 kg/mm ² Elongation :27% CVN impact at 0°C :60 J at (+)27°C	AC/DC (+/-)	2.50 x 350	80-110	125	1500
		3.15 x 350	90-130	90	1080
		4.00 x 450	140-190	60	720
		5.00 x 450	170-230	40	480
	AC/DC (+)	3.15 x 350/450	160-180	85	680
		4.00 X 450	200-250	45	360
		5.00 x 450	250-300	30	240

MANGALAM CAST IRON ELECTRODES

CHEMICAL PROPERTIES	CURRENT (amp)	SIZE (mm)	CURRENT (amp)	PACKING SPECIFICATIONS	
				WEIGHT	WEIGHT
Carbon :2.00 Max Manganese :1.50 Max Silicon :1.50Max Sulphur :0.035 Max Phosphorous :0.035 Max	AC (70V) DC +	2.50 x 350	60-90	2 Kg	24Kg/12 Pkt
		3.15 x 350/450	90-120	2 Kg	24Kg/12 Pkt
		4.00 x 350/450	120-140	2 Kg	24Kg/12 Pkt

Mangalam-250

HARD FACING ELECTRODES



HIGH-TIDE
WELDING ELECTRODES

Mangalam
WELDING ELECTRODES

HARD FACING ELECTRODES

SR. NO.	TYPE	APPLICATION	FEATURE
01	Mangalam® HF 250 R	Shaft, Journals, Gear Teeth	Rutile Electrode giving machinable deposit hardness 250 VPN. Gives moderate resistance abrasion.
02	Mangalam® HF 350 R	Similar application requiring higher hardness	Rutile Electrode giving deposit machinable with special tools, hardness 350VPN, Gives medium. resistance to abrasion.
03	Mangalam® HF 650 R	Crusher Jaws, Bucket Teeth, Pulveriser Hammer, Cement Mill, Cane Cutting Knives & Hammer	Rutile Electrode giving non machinable deposit which can be finished by grinding only hardness 650VPN, Gives heavy resistance to abrasion.
04	Mangalam® HF 250 LH	Shaft, Journals, Gear Teeth	Basic low hydrogen electrode giving machinable deposit. Hardness 250 VPN, Gives moderate resistance to abrasion.
05	Mangalam® HF 350 LH	Similar application requiring higher hardness	Basic low hydrogen electrode giving deposit machinable with special tools hardness 350 VPN gives crack free deposit, Gives medium resistance to abrasion.
06	Mangalam® HF 650 LH	Crusher jaw, Bucket teeth, Rock crusher hammer, Ploughs, Cane cutting knives & Hammers, Cement mill Hammers	Basic low hydrogen electrode giving deposit machinable with special tools hardness 350 VPN gives crack free deposit, Gives medium resistance to abrasion.
07	Mangalam® MANGAN	Rock Crushing Jaws & Crusher Mantel, Manganese Steel rail Points and Crossing Dredger Bucket Teeth & Cement Grinder teeth, bulldozer Teeth, Manganese Steel Casting etc.	Medium heavy coated electrode for hard facing application on austenitic manganese steel parts. The weld metal is tough and work hardness to more than 500 BHN in service under severe impact. The weld deposits consists of minimum 12% Mn composition, when used on mild steel parts.

HARD FACING ELECTRODES

CHEMICAL PROPERTIES	CURRENT (amp)	SIZE (mm)	CURRENT (amp)	PACKING SPECIFICATIONS	
				Pieces Per Pack	Pieces Per Carton
C 0.02 - 0.03 Si 0.05 - 0.08 Mn 0.08 - 1.20	AC/DC (-)	3.15 x 450 4.00 x 450 5.00 x 450	100-140 140-180 180-220	13 85 50	520 340 200
C 0.20 - 0.50 Si 0.20 - 0.40 Mn 0.20 - 0.40 Cr 2.00 - 3.00	AC/DC (-)	2.50 x 350 3.15 x 450 4.00 x 450 5.00 x 450	70-100 100-140 140-180 180-220	225 130 85 50	900 520 340 200
C 0.40 - 0.65 Si 0.20 - 0.70 Mn 0.20 - 0.70 Cr 6.00 - 7.00	AC/DC (-)	2.50 x 350 3.15 x 450 4.00 x 450 5.00 x 450	70-90 100-140 140-180 180-210	225 130 85 50	900 520 340 200
C 0.02 - 0.03 Si 0.05 - 0.08 Mn 0.08 - 1.20	AC/DC (+)	3.15 x 450 4.00 x 450 5.00 x 450	100-140 140-180 180-220	130 85 55	520 340 220
C 0.15 - 0.25 Si 0.50 - 0.80 Mn 3.00 - 3.15 Cr 0.30 - 0.70	AC/DC (-)	2.50 x 350 3.15 x 450 4.00 x 450 5.00 x 450	70-100 100-140 140-180 180-220	225 130 85 55	900 520 340 220
C 0.15 - 0.25 Si 0.50 - 0.80 Mn 3.00 - 3.50 Cr 0.30 - 0.70	AC/DC (-)	2.50 x 350 3.15 x 450 4.00 x 450 5.00 x 450	70-100 100-140 140-180 180-220	225 130 85 55	900 520 340 220
C 1.05 Max Mn 11.50 - 14.00 Si 1.00 Max S 0.025 Max P 0.080 Max	D ± A50	3.15 x 350/450 4.00 x 350/450 5.00 x 450	100-140 140-190 180-220	105 65 40	420 260 160

STAINLESS STEEL ELECTRODES



STAINLESS STEEL ELECTRODE

SR. NO.	NAME AWS/SFA5.4	DESCRIPTION & APPLICATION	TYPICAL WELDMETAL CHEMISTRY %
01	Mangalam® E308L-16	Rutile type extra low carbon electrode for welding of AISI 304L, 308L, 321 & 347 Stainless Steel. Weld metal has good ductility & resistant to cracking & oxidation.	Carbon :0.04 Max Manganese :0.5 - 2.5 Silicon :0.90 Max Chromium :18 - 21 Nickel :9 - 11
02	HIGH TIDE® E309L-16	Rutile type electrode for welding of AISI 309L Stainless MAN GALAMR Steel has got excellent resistance to intergranular corrosion. Used as Buffer layer before depositing 410 & 430 weld metal.	Carbon :0.04 Max Manganese :0.5 - 2.5 Silicon :0.90 Max Chromium :22 - 25 Nickel :12 - 14
03	HIGH TIDE® E310-16	Rutile type basic coated all position welding electrode for welding of AISI 310 containing 25% chromium and MANGALAMR 20% Nickel, low spatter loss, smooth and uniform bead having easy slag removal properties, The weld deposited has excellent resistant to heat and oxidation which is very useful in fabricating furnace components, burners, heat treatment pots & baskets.	Carbon :0.08 - 0.20 Manganese :1.0 - 2.50 Silicon :0.75 Max Chromium :25 - 28 Nickel :20 - 22.5
04	Mangalam® E316L-16	Rutile type basic coated all position welding electrode for welding of AISI 316, 161, 317 grade stainless steel. Giving very smooth and ribbed bead. Slag control and removal is very easy. The weldmetal has a superior resistance to pitting corrosion. Can be used in textile, paper, petrochemical & pharmaceutical industries.	Carbon :0.04 Max Manganese :0.5- 2.50 Silicon :0.90 Max Chromium :17 - 20 Nickel :11- 14

STAINLESS STEEL ELECTRODE

TYPICAL MECHANICAL PROPERTIES	CURRENT (amp)	SIZE	CURRENT (amp)	PACKING SPECIFICATIONS		
				Size (mm)	Weight Per Pkt	Weight Per Box
Ultimate tensile :520 N/mm ² Min strength Elongation :22% Min	AC/DC (+)	2.00 x 300	40 - 70	2.00 x 350	2 kg	10kg/5pkt
		2.50 x 350	45 - 85	2.50 x 350	2 kg	10kg/5pkt
		3.15 x 350	85 -115	3.15 x 350	2 kg	10kg/5pkt
		4.00 x 350	100 - 140	4.00 x 350	2 kg	10kg/5pkt
		5.00 x 350	140 - 180	5.00 x 350	2 kg	10kg/5pkt
Ultimate tensile :520 N/mm ² Min strength Elongation :30% Min	AC/DC (+)	2.50 x 300	50 - 70	2.50 x 350	2 kg	10kg/5pkt
		3.15 x 350	70 - 100	3.15 x 350	2 kg	10kg/5pkt
		4.00 x 350	100 - 140	4.00 x 350	2 kg	10kg/5pkt
		5.00 x 350	140 - 180	5.00 x 350	2 kg	10kg/5pkt
Ultimate tensile :520 N/mm ² Min strength Elongation :30% Min	AC/DC (+)	2.50 x 350	40 - 80	2.50 x 350	2 kg	10kg/5pkt
		3.15 x 350	60 - 100	3.15 x 350	2 kg	10kg/5pkt
		4.00 x 350	90 - 140	4.00 x 350	2 kg	10kg/5pkt
		5.00 x 350	130 - 180	5.00 x 350	2 kg	10kg/5pkt
Ultimate tensile :490 N/mm ² Min strength Elongation :30% Min	AC/DC (+)	2.50 x 350	40 - 80	2.50 x 350	2 kg	10kg/5pkt
		3.15 x 350	60 - 100	3.15 x 350	2 kg	10kg/5pkt
		4.00 x 350	90 - 140	4.00 x 350	2 kg	10kg/5pkt
		5.00 x 350	130 - 180	5.00 x 350	2 kg	10kg/5pkt

MANGALAM MIG WIRE



MANGALAM MIG WIRES

SR. NO.	CLASSIFICATION AWS/SFA 5.18, IS, DIN	DESCRIPTION & APPLICATION	TYPICAL WIRE CHEMISTRY WT%
01	AWS A/SFA 5.18 ER70S-6	MANGALAM MIG WIRE is double deoxidized Copper Coated Carbon Steel MIG filler wire for MIG/MAG Welding of Carbon Steels, General & Structural Engineering. It has a uniform copper coating, smooth feeding, Stable Arc and minimum spatter under optimum welding conditions. Normally recommended with CO2 shielding, can be used with Ar-CO2 mixtures also. The higher content of deoxidizers makes this wire suitable for applications where dust, rust, or mill scale is present. For Best performance, should be used on clean, oil-free base material. MIG (CO2) Wire is widely used in applications in Auto motive Industry. Construction and Mining equipment, Railway Wagons and Coaches, etc. Also suitable for welding Pipelines, Pressure Vessels, Duct Work, LPG cylinders, Pre Engineered Buildings, Shipping Containers, and Structural Steel Components. Welding Positions : F, H, V-up, V- down, OH	C : 0.06 - 0.15 Mn : 1.4 - 1.85
02	IS 6419- S-4		Si : 0.8 - 1.15 S : 0.035 max
03	DIN-8559- SG2		P : 0.025 max Cu : 0.50 max

MANGALAM MIG WIRES

TYPICAL MECHANICAL PROPERTIES			WELDING PARAMETERS						PACKING DATA
Properties	100% CO2	80/20 AR- CO2	SIZE	VOLTAGE V	AMPERAGE AMPERE	CURRENT POLARITY	FLOW RATE CO2	FLOW RATE Argon Shield S	
UTS, MPa YS, MPa	480 Min 400 Min	550 -600 460 Min	0.8	18-24	70-22	DCEP (+ve)	10-15 LPM	5-7 LPM	0.80mm 1.00mm 1.20mm
EL %	22 Min	24 Min	1.0	20-28	100-275	DCEP (+ve)	10-20LPM	10-20LPM	12.5/ 15 Kg. Spool
CVN Impact at -30°C, J	47 Min	47 Min	1.2	24-30	150-300	DCEP (+ve)	15-25LPM	14-20LPM	MIG Pac Drum: 100/250 kg.

Mangalam®

FCW E71T-1C

(RUTILE TYPE FLUX CORED WIRE)



CLASSIFICATION

AWS A/ SFA 5.20 E 71T-1C

BIS: IS 15769 ET531RC9-H5

EN ISO 17632-A T42 2 R C 1 H5

FEATURES

- Rutile type gas shielded flux cored wire
- Designed for optimum performance with 100% Co₂ shielding gas.
- Low fumes, minimal spatter, All position welding
- Easy slag removal, weld metal consistently free of inclusion and porosity.
- Radiographic quality weld

TYPICAL APPLICATIONS

- Welding of C-Mn steel with Tensile strength up to 550 N/mm²
- Chemical plant machinery, Hulls
- Structural steel fabrication
- Bridges, Shipbuilding, Towers, Cranes
- Construction equipment, Farm machinery, Rolling stocks
- Joining steels conforming to ASTM SA 36/ 36M; Grade A/B/C/D of SA 283/283M and SA 414/414M

TYPICAL CHEMICAL COMPOSITION OF WELD METAL %

Elements	C	Mn	Si	S	P	Cr	Ni	Mo	V	Cu
Typical value	0.06	1.30	0.40	0.010	0.015	0.020	0.015	0.010	0.010	0.010
*Specification	0.12	1.75	0.90	0.030	0.030	0.20	0.50	0.30	0.08	0.35

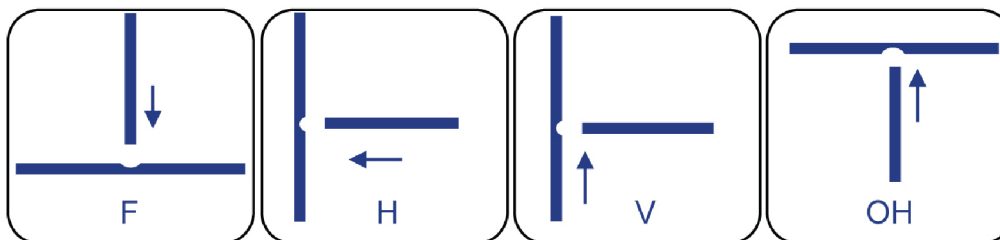
*(single values are maximum)

MECHANICAL PROPERTIES OF ALL WELD STEEL

	Condition	UTS N/mm ²	YS N/mm ²	EL %	CVN Impact at Minus 20°C (J)
Typical	As welded	550	460	27	70
Specification		490-670	390 Min	22 Min	27 Min

Radiography Test II Blue Standard	Satisfactory
Diffusible Hydrogen per 100 gm weld metal	5ml max

WELDING POSITION: F,H,V,OH



WELDING PARAMETERS: DCEP (DC +1)

Diameter (mm)	Flat & Horizontal		Vertical up		Overhead	
	Current (A)	Volt (V)	Current (A)	Volt (V)	Current (A)	Volt (V)
1.20	150-300	22-28	100-200	20-26	120-200	22-30
1.60	200-350	24-36	120-220	20-26	150-250	22-32

Shielding Gas: CO₂ (100 %); Flow rate 15-25 LPM

PACKING

- Vacuum pack of 15 kg wire layer wounded on plastic spool
- Drum packing: 100 kg and 250 kg



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