

	Autotherme Grade-E Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
EH-10K

CHARACTERISTICS & APPLICATIONS :

Copper coated High manganese special wire to be used in combination with acidic as well as basic flux for the welding of structural steels and fine grained steels requiring, 480 MPa tensile strength in the stress relieved conditions.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.07-0.15	1.30-1.70	0.05-0.25	0.025 Max	0.025 Max	0.35 Max
Typical	0.10	1.55	0.21	0.010	0.013	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-8 (MOD)	Typical	0.08	1.55	0.21	0.010	0.013	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at		
					-29°C	-40°C	-46°C
SAF-8 (MOD)	Typical	520	568	24	140	124	110

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm,& 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

An ISO 9001: 2008 COMPANY D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com	
JUN 2017 (Rev.: 02)	

	Autotherme Grade-E (Mod) Copper coated solid wire for Submerged Arc Welding	
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CODIFICATION: **AWS: SFA 5.17**
EH11K

CHARACTERISTICS: Autotherme Grade-E (Mod) Copper Coated with high manganese contents solid wire for submerged arc welding. These are suitable for welding of structural steels & fine grain steels.

APPLICATIONS: Autotherme Grade-E (Mod) solid wire is suitable for welding of low alloys structural steels. The weld metal possesses high tensile strength and meets the radiographic quality requirements. Especially suitable for welding of structural steels, pressure vessels and other fabrication steels. Suitable for welding of ASTM steels: Grade ASTM A285Gr.A, B, C & ASTM A516, 515Gr.70 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.07-0.15	1.40-1.85	0.80-1.15	0.030 Max	0.030 Max	0.35 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL WITH MAXFLUX SAF – 8 (LS) WT. %:

Element	C	Mn	Si	S	P	Cu
Typical	0.08	1.65	0.86	0.010	0.014	0.17

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL

Maxflux	Property	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) at -40°C
SAF-8 LS	Typical	580.0	520.0	23.0	62

PACKAGING	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 02)	

	Autotherme Grade-E (Spl) Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
EH-12K

CHARACTERISTICS & APPLICATIONS :

Autotherme Grade-E (Spl) is a manganese-alloyed Copper coated wire for the Submerged Arc Welding of medium and high strength structural steels. Autotherme Grade-E (Spl) should preferably be used together with non-alloying or slightly alloying fluxes, such as Maxflux **SAF-8 (PW)** & Maxflux **SAF-8 (LS)**

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.06-0.15	1.50-2.00	0.25-0.65	0.025 Max	0.025 Max	0.35 Max
Typical	0.10	1.75	0.28	0.009	0.012	0.15

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-8 (PW)	Typical	0.090	1.62	0.35	0.010	0.018	0.10
SAF-8 LS	Typical	0.058	1.58	0.35	0.011	0.015	0.025

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at	
					-51 °C	-62 °C
SAF-8 (PW)	Typical	470	560	27	50	-
SAF-8 LS	Typical	450	550	28	68	-
SAF-8 (PW)	SR/620° C/2 HRS	460	545	30	70	35
SAF-8 (PW)	SR/620° C/7 HRS	430	525	32	55	30

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm,& 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)

	Autotherme Grade-E (CTOD) Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
EH-10K

CHARACTERISTICS & APPLICATIONS :

Copper coated High manganese special wire to be used in combination with acidic as well as basic flux for the welding of structural steels and fine grained steels requiring, 480 MPa tensile strength in the stress relieved conditions.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.07-0.15	1.30-1.70	0.05-0.25	0.025 Max	0.025 Max	0.35 Max
Typical	0.10	1.55	0.21	0.010	0.013	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-8 (LS) CTOD	Typical	0.08	1.55	0.21	0.010	0.013	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at		
					-29°C	-40°C	-46°C
SAF-8 (LS) CTOD	Typical	520	568	24	140	124	110

CTOD TEST: Satisfactory as per BS 7448-1991 Part 2

Average CTOD =1.41 mm

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm,& 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)

	Autotherme Grade-F	
	Copper coated solid wire for Submerged Arc Welding	

CODIFICATION: **AWS: SFA 5.23**
EA-2

CHARACTERISTICS & APPLICATIONS:

Copper coated low alloy steel solid wires to be used with basic flux for welding of high tensile fine grain steel as well as steel which required high ductility. The weld metal has good elevated temperature properties and improved corrosion resistance features.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.17	0.95-1.35	0.20 Max	0.025 Max	0.025 Max	0.45-0.65	0.35 Max
Typical	0.12	1.10	0.16	0.020	0.021	0.50	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL WITH MAXFLUX SAF-223 WT. %:

Element	C	Mn	Si	S	P	Mo	Cu
Typical	0.07	1.38	0.59	0.018	0.022	0.47	0.15

MECHANICAL PROPERTIES OF ALL WELD METAL

Maxflux	Property	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) at -29°C
SAF-223	Typical	620.0	530.0	27	85

PACKAGING	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 02)	

	Autotherme Grade-G Copper Coated Solid Wire for Submerged Arc Welding	
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CODIFICATION: **AWS: SFA5.23**
EG

CHARACTERISTICS: Autotherme Grade-G Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition steels.

APPLICATIONS: Copper coated solid wire used with Maxflux SAF-11 in single & multilayer welding of various weathering steels. Especially suitable for welding of Corten steels used in chemical, Petrochemicals and railway industries to resist atmospheric corrosion.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.10 Max	0.25-0.60	0.07 Max	0.030 Max	0.030 Max	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF -11 FLUX

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	Impact CVN(J) -20° C
As Welded	570.0	480.0	24.0	45

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)	

	Autotherme Grade-H Copper Coated Solid Wire for Submerged Arc Welding	
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CODIFICATION:

AWS: SFA5.23
ENi2

CHARACTERISTICS:

Autotherme Grade-H Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition steels.

APPLICATIONS:

Copper coated solid wire used in single & multilayer welding of various steels. Especially suitable for welding of Pressure Vessels, Petrochemicals, Off-shore, refineries and railway industries etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Ni	Cu
Range	0.12 Max	0.75-1.25	0.05-0.30	0.020 Max	0.020 Max	2.10-2.90	0.35 Max
Typical	0.072	0.95	0.20	0.010	0.010	2.50	0.20

MECHANICAL PROPERTIES WITH MAXFLUX SAF-9.

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	Impact CVN(J)	
				-46° C	-51° C
As Welded	695.0	620.0	19.7	80	60

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)	

	Autotherme Grade-J	
	Copper coated solid wire for Submerged Arc Welding	

CLASSIFICATION: AWS: SFA 5.23
EA4

CHARACTERISTICS & APPLICATIONS:

Autotherme Grade-J is a manganese-alloyed, copper coated wire for the submerged arc welding of medium and high strength structural steels. Autotherme Grade-J should preferably be used together with non alloying or slightly alloying fluxes.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.15	1.20-1.70	0.20 Max	0.025 Max	0.025 Max	0.45-0.65	0.35 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Mo	Cu
723	Typical	0.075	1.54	0.18	0.018	0.023	0.52	0.15

MECHANICAL PROPERTIES OF WELD METAL:
(PWHT AT 620°C FOR ONE HOUR)

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI(L=4d) (%)	CVN Impact (J) at	
					-20°C	-30°C
723	Typical	528	608	27.2	105	88

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)	

	Autotherme Grade-L Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.23
EB2

CHARACTERISTICS

Autotherme grade-L wire is a copper coated 1.25Cr-0.5Mo solid wire for submerged arc welding. These wires are suitable for welding of creep resistance and similar composition high strength steels.

APPLICATIONS:

Autotherme grade-L wire is a suitable for welding of similar grade creep steels. The weld metal possesses good high temperature properties and meets radiographic quality Especially suitable for welding of pipes and tubes of matching compositions in power plants, refineries, petrochemicals, fertilizers plants etc. Suitable for welding of ASTM steels Grade F2, F11, F12, class 1 & 2 of SA-182, Grade T11 of SA-199, Grade T2, T11 & T12 of SA-213, GRADE WC6 OF SA-217, Grade P2, P11 & P12 of SA-335, Grade FP2, FP11 & FP12 of SA-369, Grade2, 11 & 12 of SA-387, Grade CP2,CP11 & CP12 of SA-426, and equivalent grade steels.

CHEMICAL COMPOSITION OF SOLID WIRE, %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.07-0.15	0.45-1.00	0.05-0.30	0.025 Max	0.025 Max	1.00-1.75	0.45-0.65	0.35 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Mo	Cu
SAF -13	Typical	0.06	0.78	0.21	0.009	0.020	1.10	0.52	0.21

MECHANICAL PROPERTIES OF ALL WELD METAL: (PWHT AT 690°C FOR ONE HOUR)

MAXFLUX	Property	UTS(MPa)	0.2% YS(MPa)	%EI (L=4d)
SAF-13	Typical	637.2	559.2	24.4

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm, & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)

	Autotherme Grade-LR Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: **AWS: SFA 5.23**
EB2R

CHARACTERISTICS

Autotherme Grade-LR Copper Coated Low Alloy Solid Wire for submerged arc welding specially designed for welding 1.25% Cr- 0.5% Mo steels. These wires are suitable for welding of creep resistant & similar composition of high strength steels. R designator is applicable for ultra low residuals, which results low Bruscato factor (X- Factor).

APPLICATIONS:

Autotherme Grade-LR low alloy solid wire is suitable for welding of various structural & Pressure vessel steels. Main areas of application are associated with steam generating power plant, piping, turbine castings, steam chests, valve bodies and boiler super heaters like A387 Gr 11 & 12, A182 F11 & F12, A217 WC6 & WC11, A234 WP11 & WP12 A199 T11.

CHEMICAL COMPOSITION OF SOLID WIRE, %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.07-0.15	0.45-1.00	0.05-0.30	0.025 Max	0.025 Max	1.00-1.75	0.45-0.65	0.35 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Mo	Cu
SAF -12	Typical	0.070	0.71	0.32	0.009	0.009	1.21	0.52	0.13

MECHANICAL PROPERTIES OF ALL WELD METAL: (PWHT AT 690°C FOR ONE HOUR)

MAXFLUX	Property	UTS(MPa)	0.2% YS(MPa)	%El (L=4d)
SAF-12	Typical	580	490	23.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm, & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)

	Autotherme Grade-M Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION : AWS: SFA 5.23
EB3

CHARACTERISTICS

Autotherme grade-M is a copper coated 2.25Cr-1.0Mo solid wire for submerged arc welding. These wires are suitable for welding of creep resistance and similar composition high strength steels.

APPLICATIONS:

Autotherme grade-M filler wire suitable for welding of similar grade creep steels. The weld metal possesses good high temperature properties. It deposits notch free weld deposit with excellent mechanical properties especially suitable for welding of pipes and tubes of matching compositions in power plants, Refineries, Petrochemicals, Fertilizer etc. Suitable for welding of ASTM steels : Grade F22(class 1&3) of SA-182 & SA 336, Grade T4, T22 of SA-199, Grade T22 OF SA-213, GRADE WC9 OF SA-217, Grade P22 of SA-335, Grade FP22 Of SA-369, Grade22, 22L of SA-387, Grade CP22 of SA-426, Grade 22 of SA-541, Class 1 of A,B types of SA-542, etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.05-0.15	0.40-0.80	0.05-0.30	0.025 Max	0.025 Max	2.25-3.00	0.90-1.10	0.35 Max

CHEMICAL COMPOSITION OF ALL WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Mo	Cu
SAF-13	Typical	0.07	0.71	0.32	0.010	0.022	2.21	1.10	0.13

MECHANICAL PROPERTIES OF WELD METAL: (PWHT AT 690°C FOR ONE HOUR)

MAXFLUX	Property	UTS(MPa)	0.2% YS (MPa)	%EI (L=4d)
SAF-13	Typical	650.0	570.0	22.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017(Rev.: 03)

	Autotherme Grade-MR Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION : AWS: SFA 5.23 / EB3R

CHARACTERISTICS: Autotherme Grade-MR Copper Coated Low Alloy Solid Wire for Submerged Arc Welding specially designed for welding 2.25% Cr-1% Mo steels. These wires are suitable for welding of creep resistant & similar composition of high strength steels. R designator is applicable for ultra low residuals which results low Bruscato factor (X- Factor).

APPLICATIONS: Autotherme Grade-MR low alloy solid wire is suitable for welding of various structural & Pressure vessel steels. The weld metal possesses high temperature ability & excellent mechanical property. Main areas of application are associated with steam generating power plant, turbine castings, steam chests, valve bodies and boiler super heaters ASTM A387 Gr 21 & 22 A234 WP22 A199 T21, T22 A200 T21, T22 A213 T22A335 P22.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.05-0.15	0.40-0.80	0.05-0.30	0.025 Max	0.025 Max	2.25-3.00	0.90-1.10	0.35 Max

CHEMICAL COMPOSITION OF ALL WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Mo	Cu
SAF-12	Typical	0.07	0.73	0.31	0.009	0.009	2.21	1.10	0.11

**MECHANICAL PROPERTIES OF WELD METAL:
(PWHT AT 690°C FOR ONE HOUR)**

MAXFLUX	Property	UTS(MPa)	0.2% YS (MPa)	%El (L=4d)
SAF-12	Typical	640.0	570.0	22.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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	Autotherme Grade-N Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION : **AWS: SFA 5.23**
EB9

CHARACTERISTICS: Autotherme grade-N is a copper coated 9%Cr-1.0%Mo solid wire for submerged arc welding. These wires are suitable for welding of creep resistance and similar composition high strength steels.

APPLICATIONS: Autotherme grade-N solid wire suitable for welding of similar grade creep steels. The weld metal possesses good high temperature properties. It deposits notch free weld deposit with excellent mechanical properties especially suitable for welding of pipes and tubes of matching compositions in power plants, Refineries, Petrochemicals, Fertilizer etc. Suitable for welding of ASTM steels: Grade A 213 T91, A 335 P91, A 387 Gr 91, A 182 / A336, A 217 C12A, A 234 WP91, A 369 FP91etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	V	Cu	Nb	N	Al
Range	0.07-0.13	1.25 Max	0.5 Max	0.010 Max	0.010 Max	8.50-10.50	1.0 Max	0.85-1.15	0.15-0.25	0.10 Max	0.02-0.10	0.03-0.07	0.04 Max

CHEMICAL COMPOSITION OF ALL WELD METAL WITH MAXFLUX SAF-12

Element	C	Mn	Si	S	P	Cr	Ni	Mo	V	Cu	Nb	N	Al
Typical	0.10	0.90	0.25	0.009	0.009	9.5	0.40	1.0	0.20	0.010	0.04	0.04	0.02

MECHANICAL PROPERTIES OF WELD METAL:
(PWHT AT 760°C FOR TWO HOURS)

MAXFLUX	Property	UTS(MPa)	0.2% YS (MPa)	%EI (L=4d)
SAF-12	Typical	680	575	21.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

An ISO 9001: 2008 COMPANY D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com JUN 2017 (Rev.: 04)	
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Autotherme Grade-P

Copper Coated Solid Wire for Submerged Arc Welding



CODIFICATION:

AWS: SFA5.23
EF3

CHARACTERISTICS:

Autotherme Grade-P Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition high strength & Quenched steels.

APPLICATIONS:

Autotherme Grade-P low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, and meets the radiographic quality requirements. Especially suitable for welding of tubes matching composition in power plants, Refineries, Petrochemicals and Fertilizer Plants. Suitable for welding of ASTM steels: Grade ASTM A302 Gr. C, D & A533 type B, C or D etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Ni	Mo	Cu
Range	0.10-0.18	1.50-2.40	0.30 Max	0.025 Max	0.025 Max	0.70-1.10	0.40-0.65	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF-10

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) -40°C
620°C for 1 hr.	640.0	565.0	19.2	52
AW	656.0	572.0	18.4	47

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)



Autotherme Grade-Q

Copper Coated Solid Wire for Submerged Arc Welding



CODIFICATION:

AWS: SFA5.23
EM4

CHARACTERISTICS:

Autotherme Grade-Q Copper Coated with 2.5 % Ni solid wire for submerged arc welding. These are suitable for welding of similar composition high strength & Quenched steels.

APPLICATIONS:

Autotherme Grade-Q low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, and meets the radiographic quality requirements. Especially suitable for welding of tubes matching composition in power plants, Refineries, Petrochemicals and Fertilizer Plants. Suitable for welding of ASTM steels: Grade ASTM A514, A517, A543 type B or C etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Range	0.10 Max	1.40- 1.80	0.20- 0.60	0.015 Max	0.010 Max	0.60 Max	2.0-2.80	0.30-0.65	0.25 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF -10

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	Impact CVN(J) -60°C
As Welded	782.0.0	695.0	18.2	66

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)



Autotherme Grade-R

Copper Coated Solid Wire for Submerged Arc Welding



CODIFICATION:

AWS: SFA5.23
EB6

CHARACTERISTICS:

Autotherme Grade-R Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition high strength & Quenched steels.

APPLICATIONS:

Autotherme Grade-R low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, and meets the radiographic quality requirements. Especially suitable for welding of tubes matching composition in power plants, Refineries, Petrochemicals and Fertilizer Plants. Suitable for welding of ASTM steels: Grade ASTM A213Gr.T5 A335 Gr.P5, A217 Gr.C5 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.10 Max	0.35- 0.70	0.05- 0.50	0.025 Max	0.025 Max	4.50- 6.50	0.45- 0.70	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF-12

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) -20°C
PWHT / 745°C for 1 hr.	655.0	548.0	21.0	32

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)

 Complete Welding Support	Autotherme Grade-S	
	Copper Coated Solid Wire for Submerged Arc Welding	

CODIFICATION: AWS: SFA5.23
ENi 3

CHARACTERISTICS:

Autotherme Grade-S Copper Coated with 3.5 % Ni solid wire for submerged arc welding. These are suitable for welding of similar composition high strength steels.

APPLICATIONS:

Autotherme Grade-S low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, Excellent CVN toughness at -70 °C and meets the radiographic quality requirements. Especially suitable for welding of tubes matching composition in power plants, Refineries, Petrochemicals and Fertilizer Plants. Suitable for welding of ASTM steels: Grade ASTM A203Gr.E, ASTM A203Gr.D, ASTM A352 LC3 & ASTM A352 LC4 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Cu
Range	0.13 Max	0.6-1.20	0.05-0.30	0.020 Max	0.020 Max	0.15 Max	3.10-3.80	0.35 Max

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL

WITH MAXFLUX	Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	Impact CVN(J) at -70°C
SAF-10	As Welded	600.0	500.0	24	40
	PWHT at 620°C for one hour	570.0	490.2	27	50

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)



Autotherme Grade-T

Copper Coated Solid Wire for Submerged Arc Welding



CODIFICATION:

AWS: SFA5.23
ENi1

CHARACTERISTICS:

Autotherme Grade-T Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition where impact properties required at sub zero temp. down to -60°C .

APPLICATIONS:

Autotherme Grade- T low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, and meets the radiographic quality requirements. Especially suitable for welding of matching composition in power plants, Refineries, Petrochemicals and Fertilizer Plants. Suitable for welding of ASTM steels: Grade ASTM A516Gr.60,65,70 & A537 Class 1 or2 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Range	0.12 Max	0.75- 1.25	0.05- 0.30	0.020 Max	0.020 Max	0.15 Max	0.75- 1.25	0.30 Max	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF-10.

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	Impact CVN(J) -60°C
As Welded	510.0	430.0	23.0	44
PWHT / 620°C for 1 hr.	498.0	424.0	24.0	50

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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	Autotherme Grade-U Copper Coated Solid Wire for Submerged Arc Welding	
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CODIFICATION: **AWS: SFA5.23**
EA3

CHARACTERISTICS: Autotherme Grade-U Copper Coated solid wire for submerged arc welding. These are suitable for welding of heat resistant steels.

APPLICATIONS: Autotherme Grade-U low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength, and meets the radiographic quality requirements. Especially suitable for welding of tubes matching composition in power plants, Petrochemicals and Suitable for welding of ASTM steels: A516 Gr. B, C & IS 2002 type B, C API Gr. 5L X60-X80 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cr	Mo	Cu
Range	0.05-0.17	1.65-2.20	0.20 Max	0.025 Max	0.025 Max	0.15 Max	0.45-0.65	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF-723.

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) -40°C
As Welded	620.0	550.0	22.2	>27
PWHT / 620 °C for 1 hr.	590.0	510.0	23.4	50

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 03)	

	Autotherme Grade-U (Mod) Copper Coated Low carbon, high manganese high Silicon, ½ Moly special purpose wire for SAW	
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CODIFICATION: **AWS: SFA5.23**
EA3K

CHARACTERISTICS: Autotherme Grade-U (Mod) Copper Coated Low carbon, high manganese high Silicon, ½ Moly special purpose wire for submerged arc welding. The wire gives good radiographic quality deposits with excellent crack resistance and toughness.

APPLICATIONS: Autotherme Grade-U (Mod) is suitable for single, multi-pass welding especially Suitable for two run technique, suitable for similar composition C-Mo steels, fine grained steels and equivalent grade steels like: Gr. F1 of SA-182 and SA-336 Gr. A of SA-204, Gr. P1 pipe of SA-335, class 1 of A grade of SA-533, etc suitable for fabrication of heavy machinery, steel plant equipments & structures, high strength fabricated structures etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.15	1.60-2.10	0.50-0.80	0.025 Max	0.025 Max	0.40-0.60	0.35 Max

MECHANICAL PROPERTIES WITH MAXFLUX SAF-723. [F8P8-EA3K-A3H8]

Observed	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) -62°C
As Welded	630.0	556.0	22.0	>27
PWHT / 620 °C for 1 hr.	580.0	510.0	23.4	50

Packing:	Standard Size	2.5, 3.2 & 4.0 mm
	Quantity	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)	

	Autotherme WB36 Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS A5.23/EG

CHARACTERISTICS:

Autotherme WB36 Copper coated solid wire for submerged arc welding application. A nominal composition of the wire is 1% Ni-0.5%Mo & Capable of achieving higher tensile strength.

APPLICATIONS:

Autotherme WB36 is a construction steel for service up to 450°C typical application designed on the basis of tensile strength. It is mainly used for standard carbon steels (ASTM Code Case 2353A335P36) in Conventional and nuclear power station. WB36 also finds applications for headers, manifolds and power stations.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	Al
Range	0.08-0.15	1.3-2.4	0.25-0.35	0.010 Max	0.010 Max	0.10-0.20	0.8-1.2	0.2-0.3	0.30-0.60	0.007 Max	0.041 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	Al
SAF-WB36	Range	0.17 MAX	0.8-1.2	0.25-0.50	0.02 MAX	0.025 MAX	0.20 Max	1.0-1.3	0.35 MAX	0.5-0.8	0.010 Max	0.05 MAX
	Typical	0.080	1.1	0.42	0.012	0.023	0.16	1.1	0.30	0.73	0.007	0.02

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at -29°C
SAF WB-36	Typical	600	700	20	50

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm,& 4.0 mm.
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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	Autotherme Grade-308L (SAW Wire)	
	An extra low carbon stainless steel wire of 18 % Cr & 8 % Ni type bare SS wire for SAW of austenitic corrosion resisting steels.	

CLASSIFICATION: **AWS: SFA 5.9**
ER308L

CHARACTERISTICS & APPLICATIONS:

The nominal composition of this wire is 20%Cr – 10%Ni. For 'L' grade, the carbon content is <0.03%. The wire is suitable for welding of base metal of similar composition (AISI 301, 302, 304 and equivalent types). Low carbon grade reduces the propensity for carbide precipitation and offers increasing resistance to Intergranular corrosion. The arc & current carrying characteristics assure excellent performance of outstanding bead and surface finish. Autotherme Grade-308L can be used in combination with Maxflux SS-4.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Typical	0.027	1.55	0.37	0.012	0.025	20.16	9.16	0.25	0.007
Range	0.03 Max	1.0 - 2.5	0.30- 0.65	0.03 Max	0.03 Max	19.5- 22.0	9.0- 11.0	0.75 Max	0.75 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
SS4	Typical	0.030	1.40	0.47	0.008	0.020	19.60	9.14	0.090	0.055

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	UTS (MPa)	EI (L=4d) (%)
SS4	Typical	575.0	40.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box.

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	Autotherme Grade-309L (SAW Wire)	
	An extra low carbon 24 % Cr & 13 % Ni Stainless steel wire for SAW	

CLASSIFICATION: **AWS: SFA 5.9**
ER309L

CHARACTERISTICS & APPLICATIONS:

Autotherme Grade 309L wire is suitable for welding of 24 % Cr – 13%Ni. Stainless steel wire for SAW. Low carbon grade (0.03 % max) of this wire is also available. The filler metals are used for both joining similar metals or joining of dissimilar metals like; mild steel/ low alloy steel with 302/304 grade stainless steel. also suitable for cladding applications.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Typical	0.028	1.70	0.38	0.011	0.025	23.95	12.15	0.065	0.17
Range	0.03 Max	1.0 - 2.5	0.30- 0.65	0.03 Max	0.03 Max	23.0- 25.0	12.0- 14.0	0.75 Max	0.75 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Cu
SS4	Typical	0.05	1.50	0.35	0.012	0.025	24.0	12.5	0.30

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	UTS (MPa)	EI (L=4d) (%)
SS4	Typical	590.0	35.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box.

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	Autotherme Grade-316L (SAW Wire) An extra low carbon Stainless steel wires of the 18 % Cr, 12 % Ni and 3% Mo type for SAW	
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CLASSIFICATION: **AWS: SFA 5.9**
ER316L

CHARACTERISTICS & APPLICATIONS:

Autotherme Gr. 316L wire is suitable for welding of 18 % Cr, 12 % Ni & 3 % Mo Stainless steel wire for SAW. Low carbon grade (0.03 % max) of this wire is also available. The filler metals are used for joining AISI 316 grade stainless steels and similar alloys.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo
Typical	0.025	1.75	0.4	0.015	0.015	19.0	12.0	2.7
Range	0.03 Max	1.0 – 2.5	0.30- 0.65	0.03 Max	0.03 Max	18.0- 20.0	11.0- 14.0	2.0- 3.0

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Mo
SS4	Typical	0.025	1.75	0.60	0.015	0.017	19.00	12.00	2.7

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	UTS (MPa)	EI (L=4d) (%)
SS4	Typical	590.0	32.0

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box.

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JUN 2017 (Rev.: 01)

	Autotherme Grade -318 (SAW Wire) Autotherme Grade-318 is a low carbon & Stabilized wire for the SAW welding	
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CLASSIFICATION: **AWS: SFA 5.9**
ER318

CHARACTERISTICS & APPLICATIONS:

Autotherme Gr.318 is a low carbon, stainless steel wire for the SAW wire capable of making single pass or multiple pass welding for Intergranular corrosion resistant steels of the 18Cr 12Ni 3Mo type, such as AISi 316 and 316L, or somewhat lower alloyed types. Autotherme Gr. 318 can be used in combination with Maxflux SS-4.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Nb
Typical	0.07	1.6	0.55	0.010	0.015	18.5	12.0	2.50	0.10	0.40
Range	0.08 Max	1.0 - 2.5	0.30- 0.65	0.03 Max	0.03 Max	18.0- 20.0	11.0- 14.0	2.0 - 3.0	0.75 Max	8xC min- 1.0 max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Nb
SS4	Typical	0.07	1.62	0.58	0.010	0.010	19.5	12.5	2.6	0.10	0.56

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	UTS (MPa)	EI (L=4d) (%)
SS4	Typical	610	27

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box.

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	Autotherme Grade -347 (SAW Wire) Autotherme Grade-347 is an Niobium Stabilized 18Cr8Ni type corrosion resistance SAW Wire	
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CLASSIFICATION: **AWS: SFA 5.9**
ER347

CHARACTERISTICS & APPLICATIONS:

Autotherme Gr. 347 continuous, solid corrosion-resistant, chromium nickel wire for welding austenitic chromium nickel alloys of the 18% Cr-8% Ni type. Autotherme Grade-347 has good general corrosion resistance. The alloy is stabilized with niobium to improve resistance to the Intergranular corrosion of the weld metal. Due to the niobium content, this alloy is recommended for use at higher temperatures. This wire can be used in combination with Maxflux SS-4.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cr	Ni	Cu	Nb
Typical	0.07	1.5	0.52	0.010	0.012	19.5	9.5	0.10	0.45
Range	0.08 Max	1.0- 2.5	0.30- 0.65	0.03 max	0.03 max	19.0- 21.5	9.0- 11.0	0.75 max	10xC min- 1.0 max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cr	Ni	Cu	Nb
SS4	Typical	0.07	1.52	0.55	0.010	0.012	20.0	9.5	0.10	0.70

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	UTS (MPa)	EI (L=4d) (%)
SS4	Typical	540	32

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box.

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	Autotherme Grade-A Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
EL-8

CHARACTERISTICS & APPLICATIONS:

Copper coated Low-Manganese general purpose solid wire capable of making single pass or multiple pass welding for structural steel Overlaying and hard facing with suitable flux. Autotherme Grade-A wire is ideally suited for welding of structural steels, offshore platform, Ships, Pressure vessel and suitable for overlaying and build up of idlers and rollers etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.10 Max	0.25-0.60	0.07 Max	0.030 Max	0.030 Max	0.35 Max
Typical	0.07	0.40	0.03	0.020	0.020	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-2	Typical	0.05	1.10	0.35	0.027	0.028	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI(L=4d) (%)	CVN Impact (J) at	
					RT	0°C
SAF-2	Typical	410	500	26	55	30

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 02)

	Autotherme Grade-A (Mod) Copper coated solid wire for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17
 EL-12

CHARACTERISTICS:

Autotherme Grade-A (Mod) Copper Coated solid wire for submerged arc welding. These are suitable for welding of similar composition general purpose steels.

APPLICATIONS:

Autotherme Grade-A (Mod) low alloy solid wire is suitable for welding of similar grade steels. The weld metal possesses high tensile strength and meets the radiographic quality requirements. Especially suitable for welding of structural steels, pressure vessels and other fabrication involving medium tensile & low alloy steel. Suitable for welding of ASTM steels: Grade ASTM A285Gr.A, B, C & ASTM A516 Gr.70 etc.

CHEMICAL COMPOSITION OF SOLID WIRE WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.04-0.14	0.25-0.60	0.10 Max	0.030 Max	0.030 Max	0.35 Max

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL

Maxflux	Property	UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) at -20°C
SAF-2	Typical	>550	> 420	28	40-50

PACKAGING	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)	

	Autotherme Grade-B Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
 EM-12K

CHARACTERISTICS & APPLICATION :

Copper coated Medium - Manganese, Silicon killed wire to be used with neutral or semi basic flux for welding of general purpose fabrication, off-shore platform, medium and high tensile structural steels, ships, boiler and pressure vessels application etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.05-0.15	0.80-1.25	0.10-0.35	0.030 Max	0.030 Max	0.35 Max
Typical	0.09	0.90	0.20	0.027	0.026	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-2	Typical	0.07	1.25	0.50	0.028	0.026	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at		
					RT	0°C	-20°C
SAF-2	Typical	418	510	25	60	40	30

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 02)

	Autotherme Grade -B (Mod) Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17
 EM-13K

CHARACTERISTICS & APPLICATION :

Copper coated Medium- Manganese, Silicon killed wire to be used with neutral or semi basic flux for welding of general purpose fabrication, off-shore platform, medium and high tensile structural steels, ships, boiler and pressure vessels application etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.06 - 0.16	0.90-1.40	0.35-0.75	0.030 Max	0.030 Max	0.35 Max
Typical	0.09	1.08	0.56	0.027	0.026	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-2	Typical	0.07	1.25	0.50	0.028	0.026	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at		
					RT	0°C	-20°C
SAF-2	Typical	418	515	25	60	40	30

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. Wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 01)	

	Autotherme Grade-C Copper coated solid wire for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.17

EH-14

CHARACTERISTICS & APPLICATIONS:

Copper coated high medium-manganese, wire to be used in combination with basic type of flux for the welding of structural steel pressure vessel and boilers involving steels such as A-515 Gr.70.A - 516 Gr.70, IS-8500 etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Cu
Range	0.10-0.20	1.70-2.20	0.10 Max	0.030 Max	0.030 Max	0.35 Max
Typical	0.12	1.80	0.05	0.027	0.028	0.20

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MAXFLUX	Element	C	Mn	Si	S	P	Cu
SAF-4	Typical	0.13	1.80	0.38	0.028	0.027	0.15

MECHANICAL PROPERTIES OF WELD METAL:

MAXFLUX	Property	0.2%YS (MPa)	UTS (MPa)	EI (L=4d) (%)	CVN Impact (J) at		
					-18°C	-29°C	-40°C
SAF-4	Typical	418	530	26	90	75	45

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg. wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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JUN 2017 (Rev.: 02)	

 Complete Welding Support	Maxflux SAF-8 (LS) CTOD Agglomerated basic flux for Submerged Arc Welding.	
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CODIFICATION: AWS SFA 5.17/ F7A6/P6/P8-EH10K, F7A8/P8-EH10K

CHARACTERISTICS: Maxflux SAF-8 (LS) CTOD is a fluoride-basic type flux suitable to weld medium to high strength steels and good CTOD fracture toughness properties was achieved for offshore constructions. The weld metal made with this flux gives very low diffusible hydrogen content, good crack resistance and higher sub-zero toughness properties.

The flux is neutral in Mn & Si pick up and meets mechanical requirements after post-weld heat treatment at 620°C up to six hours of holding. The weld deposit is of radiographic quality. The weld metal passes the corrosion tests as per NACE standard TM-01-77 & TM-02-84.

APPLICATIONS: Maxflux SAF-8 (LS) CTOD is suitable for single & multi-layer welding of high tensile quenched & tempered steel, fine grained steels, heat resistant structural steels, nuclear sector fabrication, etc.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	S	P	Cu
Autotherme Grade- E (CTOD)	0.086	1.58	0.36	0.012	0.013	0.15

ALL-WELD MECHANICAL PROPERTIES: (With Autotherme Gr E(CTOD wire)	UTS (MPa)	0.2% YS (MPa)	% EL (L=4d)	CVN Impact (J)at		
				-40°C	-51°C	-62°C
After PWHT at 620°C for 2 hours	535	438	30.0	105	86	72
After PWHT at 620°C for 6 hours	511	427	32.0	128	115	106

CTOD TEST: Satisfactory as per BS 7448-1991 Part 2 **Average CTOD =1.41 mm**

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
	10%	48%	17%	25%

BASICITY INDEX : ~3.4

GRAIN SIZE : 0.35 – 1.60 mm (10 to 30 BSS)

PACKAGING : 25 kgs poly-lined printed paper bag

RE-DRYING CONDITIONS : 300-350°C for 2 hours

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JUN 2017 (Rev.: 07)	

	Maxflux SAF-8(Mod) Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F8A5 EH-10K

CHARACTERISTICS: Maxflux SAF-8 (Mod) is a fluoride-basic type flux suitable to weld medium to high strength steels where very low diffusible hydrogen content, good crack resistance and higher sub-zero toughness properties are desired from the weld metal. The flux is neutral in Mn & Si pick up and is alloyed with Molybdenum and Nickel. The weld deposit is of radiographic quality.

APPLICATIONS: Maxflux SAF-8 (Mod) is suitable for single & multi-layer welding of high tensile quenched & tempered steel, fine grained steels, heat resistant structural steels, nuclear sector fabrication, etc.

ALL-WELD ANALYSIS, WT %:

	C	Mn	Si	S	P	Mo	Ni	Cu
Autotherme Grade E	0.085	1.55	0.21	0.010	0.013	0.25	0.40	0.15

ALL-WELD MECHANICAL PROPERTIES:

	UTS (MPa)	0.2% YS (MPa)	%EL (L=4d)	Impact, J at		
				-29°C	-40°C	-46°C
Autotherme Grade E	568	520	24	140	124	110

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
10%	48%	17%	25%

BASICITY INDEX : ~3.4

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

An ISO 9001: 2008 COMPANY
D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com JUN 2017 (Rev.: 05)

	Maxflux SAF-8 (PW) Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7P5/ P6 EH-10K, F7P5/ P6 EH-14
F7P6/P8EH-12K

CHARACTERISTICS: Maxflux SAF-8 (PW) is a fluoride-basic type flux suitable to weld medium to high strength steels where very low diffusible hydrogen content, good crack resistance and higher sub-zero toughness properties are desired from the weld metal. The flux is neutral in Mn & Si pick up and especially designed to meet the tensile & impact requirements after post-weld heat treatment condition up to 7 hours of holding at 620°C. The weld deposit is of radiographic quality.

APPLICATIONS: Maxflux SAF-8 (PW) is suitable for single & multi-layer welding of high tensile quenched & tempered steel, fine grained steels, heat resistant structural steels, nuclear sector fabrication, etc.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade E
Autotherme Grade C
Autotherme Grade E (Spl)

C	Mn	Si	S	P	Cu
0.097	1.60	0.38	0.011	0.013	0.15
0.092	1.72	0.28	0.021	0.026	0.15
0.09	1.62	0.35	0.010	0.018	0.10

ALL-WELD MECHANICAL PROPERTIES:

PWHT at 620°C/ 6 hrs (Gr. E wire)
PWHT at 620°C/ 2 hrs (Gr. C wire)
PWHT at 620°C/ 2 hrs (Gr. E (Spl) wire)
PWHT at 620°C/ 7 hrs (Gr. E (Spl) wire)

UTS (MPa)	0.2% YS (MPa)	EL (L=4d) %	CVN Impact, J at		
			-46°C	-51°C	-62°C
520	450	33	126	50	-
538	445	30	102	68	-
545	450	30	-	70	35
525	430	32	-	55	30

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
10%	48%	17%	25%

BASICITY INDEX : ~3.4

GRAIN SIZE : 0.35 – 1.60 mm [BS 10 to 44]

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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	Maxflux SAF-8 (Spl) Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7A5 EL-8

CHARACTERISTICS: Maxflux SAF-8 (Spl) is a fluoride-basic type flux suitable to weld medium to high strength steels where very low diffusible hydrogen content, good crack resistance and higher sub-zero toughness properties are required from the weld metal. The flux is neutral in Mn & Si pick up. The weld deposit is of radiographic quality and satisfies the NACE corrosion criteria of weld metal for HIC & SSC tests with Grade A (Spl) wire.

APPLICATIONS: Maxflux SAF-8 (Spl) is suitable for single & multi-layer welding of high tensile quenched & tempered steel, fine grained steels, heat resistant structural steels, nuclear sector fabrication, etc.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade A

C	Mn	Si	S	P	Cu
0.05	1.35	0.18	0.010	0.011	0.15

ALL-WELD MECHANICAL PROPERTIES:

Autotherme Grade A

UTS (MPa)	0.2% YS (MPa)	EL (L=4d) %	CVN Impact, J at	
			-40°C	-46°C
503	457	31	156	140

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
10%	48%	17%	25%

BASICITY INDEX : ~3.4

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN 2017 (Rev.: 04)	

	Maxflux SAF-9 Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATIONS: AWS SFA 5.23 F8A5/A6 ENi2-Ni2, F8A5/A6 ECNi2-Ni2

CHARACTERISTICS:

Maxflux SAF-9 is a fluoride-basic type flux suitable to weld with Autotherme Grade-H (ENi-2) & Autotherme Grade H(C) (ECNi2) wires for medium to high tensile strength steel, fine grained structural steels where very low diffusible hydrogen content, good crack resistance and higher sub zero toughness properties are desired from the weld metal. The weld deposit with these wires & flux is of radiographic quality.

APPLICATIONS:

Maxflux SAF-9 is suitable for single and multi-layer welding of high strength quench & tempered steel, ASTM 516 Gr.70 or Equivalent grade of steels, fine grained & heat resistance structural steels, nuclear sector fabrication etc.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

	Element	C	Mn	Si	S	P	Ni	Cu
Wire-AWS 5.23 class ENi2/ IRSM 39-2001 class W3 With Autotherme Grade H (ENi2) & Autotherme Grade H(C) (ECNi-2) wire	Range	0.12	0.75- 1.25	0.05- 0.30	0.020 Max	0.020 Max	2.10- 2.90	0.40 Max
	Range	0.05- 0.10	1.0- 1.6	0.30- 0.70	0.028 Max	0.028 Max	2.0- 2.9	0.10- 0.30

MECHANICAL PROPERTIES OF ALL WELD METAL:

Wire-AWS 5.23 class ENi2/ IRSM 39-2001 class W3 With Autotherme Grade H (ENi-2) & Autotherme Grade H (C) (ECNi-2) wire	UTS (MPa)	0.2%YS (MPa)	%El, L=5d (%)	CVN Impact (J) at	
				-46°C	-51°C
	550-700	470-600	24.0-27.0	50-80	40-70

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
10%	42%	18%	30%

BASICITY INDEX	: 1.80-3.40
DE TAP DENSITY	: 1.10-1.40 gm/cc
GRAIN SIZE	: (+5BSS): 0%, (-10,+44 BSS):90-95%, (-100 BSS): 0-2%
PACKAGING	: 25 Kg Poly-lined Paper Bag
RE-DRYING CONDITIONS	: 300-350°C for one hour

An ISO 9001: 2008 COMPANY

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JUN 2017 (Rev.: 03)

	Maxflux SAF-9C Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATIONS: AWS SFA 5.23 F8A5/A6 ECNi2-Ni2

CHARACTERISTICS:

Maxflux SAF-9C is a fluoride-basic type flux suitable to weld with Autotherme Grade-H (ENi-2) & Autotherme Grade H(C) (ECNi2) wires for medium to high tensile strength steel, fine grained structural steels where very low diffusible hydrogen content, good crack resistance and higher sub zero toughness properties are desired from the weld metal. The weld deposit with these wires & flux is of radiographic quality.

APPLICATIONS:

Maxflux SAF-9C is suitable for single and multi-layer welding of high strength quench & tempered steel, ASTM 516 Gr.70 or Equivalent grade of steels, fine grained & heat resistance structural steels, nuclear sector fabrication etc.

CHEMICAL COMPOSITION OF SOLID & COMPOSITE WIRE, WT. %:

	C	Mn	Si	S	P	Ni	Cu
With Autotherme Grade H (ENi2) & Autotherme Grade H (C) (ECNi2) wire	0.05-0.10	1.0-1.6	0.30-0.70	0.028 Max	0.028 Max	2.0-2.9	0.10-0.30

MECHANICAL PROPERTIES OF ALL WELD METAL:

With Autotherme Grade H (ENi2) & Autotherme Grade H (C) (ECNi2) wire	UTS (MPa)	0.2%YS (MPa)	%El, L=5d (%)	CVN Impact (J) at	
				-46°C	-51°C
	550-700	470-600	24.0-27.0	50-80	40-70

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
10%	42%	18%	30%

BASICITY INDEX : 1.80-3.40

DE TAP DENSITY : 1.10-1.40 gm/cc

GRAIN SIZE : (+5BSS): 0%, (-10,+44 BSS):90-95%, (-100 BSS): 0-2%

PACKAGING : 25 Kg Poly-lined Paper Bag

RE-DRYING CONDITIONS : 300-350°C for one hour

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JUN 2017 (Rev.: 03)



Maxflux SAF -10

Agglomerated flux for Submerged Arc Welding.



CODIFICATION:

AWS A5.23 / F8A8/P8-ENi3-Ni3, F11A8/F10A4EM4-M4, F9A4/F9P0-EF3-F3, F7A8/P8ENi1-Ni1, F8A6ENi2-Ni2

CHARACTERISTICS:

Maxflux SAF-10 is a special flux used to weld structural steels. The weld metal possesses excellent CVN toughness combined with good strength. The weld metal produces smooth beads, good wetting, and excellent slag detachability.

APPLICATIONS:

Maxflux SAF- 10 is suitable for single & multilayer welding of various structural, Boiler, Pressure vessel steels & other fabrication steels. It is suitable for welding of ASTM steels: Grade like ASTM A203Gr.E, A203Gr.D, ASTM A352 LC3, ASTM A352 LC4, A514, A517, A543 type B or C, ASTM A302 Gr. C, D, and A533 type B, C or Dm A516Gr.60,65,70 & A537 Class 1 or 2, DMR-249A plate.

TYPICAL ALL WELD CHEMICAL ANALYSIS, WT. %:

Details	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Autotherme Gr.-S	0.06	1.0	0.20	0.015	0.020	0.03	3.3	-	0.12
Autotherme Gr.-Q	0.07	1.68	0.36	0.010	0.012	0.40	2.48	0.50	0.13
Autotherme Gr.-P	0.09	1.62	0.28	0.014	0.017	-	0.92	0.52	0.12
Autotherme Gr.-T	0.08	1.20	0.34	0.013	0.016	0.09	0.96	0.20	0.13
Autotherme Gr.-H	0.076	1.00	0.197	0.0082	0.014	-	2.45	0.130	0.032

MECHANICAL PROPERTIES OF ALL WELD METAL.

Details	PWHT	UTS (MPa)	0.2 % YS (MPa)	% EL. (L=4d)	CVN Impact (J)			
					-40°C	-50°C	-60°C	-70°C
Autotherme Gr.-S	620°C for 1 hr	570.0	490.2	24.0	-	-	-	90
	AW	590	500	23.2	-	-	-	82
Autotherme Gr.-Q	AW	782.0	695.0	18.2	-	-	66	-
Autotherme Gr.-P	620°C for 1 hr	640.0	565.0	19.2	52	-	-	-
	AW	656.0	572.0	18.4	47	-	-	-
Autotherme Gr.-T	AW	510.0	430.0	23.0	-	-	44	-
	620°C for 1 hr	494.0	424.0	24.0	-	-	50	-
Autotherme Gr.-H	AW	635.4	554.8	25.7	-	65	-	-

BASICITY INDEX : ~3.1

GRAIN SIZE : 0.35-1.6 mm

PACKAGING : 25 Kg poly-lined paper bag

RE-DRYING CONDITIONS : 300-350°C for 2 hours

An ISO 9001 : 2008 certified company

D&H Sécheron Electrodes Private Limited

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JUN 2017 (Rev.: 05)

	Maxflux SAF-11	
	Agglomerated Flux for Submerged Arc Welding	

CODIFICATION: AWS: SFA 5.23 F8A2EG-G

CHARACTERISTICS: Maxflux SAF- 11 special flux to weld 0.5Cr-0.7Ni-0.5Cu Weathering steels. The weld metal produces smooth beads and good slag detachability. The weld metal gives very less diffusible hydrogen (<5 ml/100gms. of W.M.).

APPLICATIONS: Maxflux SAF-11 is suitable for single & multilayer welding of various weathering steels. Especially suitable for welding of Corten steels used in chemical, Petrochemicals and railway industries to resist atmospheric corrosion like ASTM steels: Grade ASTM A588Gr.A, B or C & A709 Gr.50W etc.

**ALL-WELD ANALYSIS,
WT %:**

Autotherme Grade -G

Element	C	Mn	Si	S	P	Cr	Ni	Cu
Range	0.12 Max	0.50- 1.30	0.35- 0.80	0.030 Max	0.030 Max	0.45- 0.70	0.40- 0.80	0.30- 0.75
Typical	0.06	0.72	0.47	0.016	0.022	0.56	0.72	0.50

**ALL-WELD MECHANICAL
PROPERTIES**

Autotherme Grade-G:

As Welded

	UTS (MPa)	0.2% YS (MPa)	%EL (L=4d)	CVN Impact, (J)at -20°C
Typical	570	480	24	45

BASICITY INDEX : ~1.8

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING: 25 kgs poly-lined paper bag

RE-DRYING CONDITION: 300°-350°C for 2 hours

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JUN 2017 (Rev.: 02)

	Maxflux SAF -12 Agglomerated flux for Submerged Arc Welding.	
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CODIFICATION: AWS A5.23 / F8P2-EB6-B6, F8P2-EB2R B2, F9 P2-EB3R B3, F9PZEB9-B9

CHARACTERISTICS: Maxflux SAF-12 is a special flux used to weld creep resistant steels. The weld metal possesses good CVN toughness combined with good strength. The weld metal produces smooth beads, good wetting, and excellent slag detachability. The weld metal gives very less diffusible hydrogen (<5 ml/100gms. of W.M.).

APPLICATIONS: Maxflux SAF- 12 is suitable for single & multilayer welding of various structural, Boiler, Pressure vessel steels, Petrochemical industries, Refineries & other fabrication steels. It is suitable for welding of ASTM steels: Grade ASTM A213Gr.T5 A335 Gr.P5, A217 Gr.C5, A387 Gr11 & 12, A182 F11 & F12, A217 WC6 & WC11, A234 WP11 & WP12 A199 T11, A387 Gr 21 & 22 A234 WP22 A199 T21, T22 A200 T21, T22 A213 T22A335 P22, A 213 T91, A 335 P91, A 387 Gr 91, A 182 / A336, A 217 C12A, A 234 WP91, A 369 FP91 etc.

TYPICAL ALL WELD CHEMICAL ANALYSIS, WT. %:

Details	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	Nb	N	Al
Autotherme Gr.-R	0.08	0.80	0.32	0.013	0.017	5.30	-	0.52	0.11	-	-	-	-
Autotherme Gr.-LR	0.07	0.71	0.32	0.009	0.009	1.21	-	0.52	0.13	-	-	-	-
Autotherme Gr.-MR	0.07	0.73	0.31	0.009	0.009	2.21	-	1.10	0.11	-	-	-	-
Autotherme Gr.-N	0.10	0.90	0.25	0.009	0.009	9.5	0.4	1.0	0.01	0.2	0.04	0.04	0.02

MECHANICAL PROPERTIES OF ALL WELD METAL

Details	PWHT	UTS (MPa)	0.2 % YS (MPa)	% EL. (L=4d)	CVN Impact (J)		
					+20°C	-20°C	-29°C
Autotherme Gr.-R	745°C for 1hr.	655.0	548.0	21.0	-	32	-
Autotherme Gr.-LR	690°C for 1hr.	580.0	490.0	23.0	-	-	65
Autotherme Gr.-MR	690°C for 1hr.	640.0	570.0	22	-	-	70
Autotherme Gr.-N	760°C for 2hr.	680.0	575.0	21.0	54	-	-

BASICITY INDEX : ~3.1

GRAIN SIZE : 0.35-1.6 mm

PACKAGING : 25 kg poly-lined paper bag

RE-DRYING CONDITIONS : 300-350°C for 2 hours

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	Maxflux SAF -13 Agglomerated flux for Submerged Arc Welding	
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CODIFICATION: **AWS A5.23 / F8P0-EB2-B2, F9P0-EB3-B3**

CHARACTERISTICS: Maxflux SAF-13 is a special flux used to weld structural steels. The Flux is specially designed to meet the tensile strength & Impact requirements. The weld metal produces smooth beads, good wetting, and excellent slag detachability. The weld metal gives very less diffusible hydrogen (<5 ml/100 gms. of W.M.).

APPLICATIONS: Maxflux SAF- 13 is suitable for single & multilayer welding of various structural, Boiler, Pressure vessel steels & other fabrication steels. It is suitable for welding of ASTM steels: A387 Gr 11, 12, A182 F11, F12, A217 WC6, WC11, A234 WP11, WP12, A199 T11 ASTM A387 Gr 21, 22 A234 WP22 A199 T21, T22 A200 T21, T22 & A213 T22A335 P22, etc.

ALL- WELD ANALYSIS, WT. %:

Details		C	Mn	Si	S	P	Cr	Mo	Cu
With Autotherme Grade - L	Range	0.05 - 0.15	1.20 Max	0.80 Max	0.030 Max	0.030 Max	1.0-1.50	0.40-0.65	0.35 Max
	Typical	0.08	0.90	0.50	0.010	0.015	1.20	0.50	0.12
With Autotherme Grade - M	Range	0.05-0.15	1.20 Max	0.80 Max	0.030 Max	0.030 Max	2.0-2.50	0.90-1.20	0.35 Max
	Typical	0.08	0.70	0.60	0.010	0.015	2.40	1.10	0.13

MECHANICAL PROPERTIES OF ALL WELD METAL

Details	PWHT	UTS (MPa)	0.2 % YS (MPa)	% EL. (L=4d)	Impact CVN (J) -18°C	Hardness (VPN)
Autotherme Grade- L	690°C for 1 hr	630	550	24	60	180
Autotherme Grade- M	690°C for 1 hr	650	570	22	70	190

BASICITY INDEX : 3.0-3.4

GRAIN SIZE : 0.35-1.6 mm

PACKAGING : 25 Kg poly-lined paper bag

RE-DRYING CONDITIONS : 300-350°C for 2 hours.

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	Maxflux SAF-42 Agglomerated hard surfacing flux for Submerged Arc Welding	
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CHARACTERISTICS:

Maxflux SAF-42 is a hard-surfacing flux for re-building of rolls of base materials as per EN -10269: 16CrMo4, 25CrMo4, 42CrMo4 specification or their near equivalent grades. The hardness of the weld metal deposited with Autotherme CR-10 wire after stress relief heat treatment ranges between 40-44 HRC and has excellent metal to metal wear resistance. Slag removal is easy and weld bead is smooth & shiny. The deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux SAF-42 flux and Autotherme Cr-10 wire combination is suitable for surfacing under moderate temperature, high compressive pressure and metal to metal wear between the job & the rolls.

ALL-WELD ANALYSIS, WT %:

Autotherme Cr-10

C	Mn	Si	Cr	Mo
0.10-0.25	0.5-1.5	1.0 max	11.0-13.0	0.50 max

WELDING CARE & PRECAUTIONS:

1. Pre-cleaning of the rolls to weld-worthy conditions.
2. Stress relieving of the worn out rolls prior to welding.
3. Pre-heating & inter-pass temperature of the rolls to 250°C.
4. The heating & cooling rate during post-weld stress relieving (SR) shall be controlled to 100°C per hour.

ALL-WELD METAL HARDNESS:

Autotherme Cr-10

On MS plate – 3 rd layer (after SR at 450°C for 4 hours)
40-45 HRC

BASICITY INDEX

: ~3.1

GRAIN SIZE

: 0.35 – 1.60 mm

PACKAGING

: 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS

: 300° – 350°C for 2 hours

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	Maxflux SAF-42 Agglomerated hard surfacing flux for Submerged Arc Welding	
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CHARACTERISTICS:

Maxflux SAF-42 is a hard-surfacing flux for re-building of rolls of base materials as per EN -10269: 16CrMo4, 25CrMo4, 42CrMo4 specification or their near equivalent grades. The hardness of the weld metal deposited with Autotherme CR-10 wire after stress relief heat treatment ranges between 40-44 HRC and has excellent metal to metal wear resistance. Slag removal is easy and weld bead is smooth & shiny. The deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux SAF-42 flux and Autotherme Cr-10 wire combination is suitable for surfacing under moderate temperature, high compressive pressure and metal to metal wear between the job & the rolls.

ALL-WELD ANALYSIS, WT %:

Autotherme Cr-10

C	Mn	Si	Cr	Mo
0.10-0.25	0.5-1.5	1.0 max	11.0-13.0	0.50 max

WELDING CARE & PRECAUTIONS:

1. Pre-cleaning of the rolls to weld-worthy conditions.
2. Stress relieving of the worn out rolls prior to welding.
3. Pre-heating & inter-pass temperature of the rolls to 250°C.
4. The heating & cooling rate during post-weld stress relieving (SR) shall be controlled to 100°C per hour.

ALL-WELD METAL HARDNESS:

Autotherme Cr-10

On MS plate – 3 rd layer (after SR at 450°C for 4 hours)
40-45 HRC

BASICITY INDEX

: ~3.1

GRAIN SIZE

: 0.35 – 1.60 mm

PACKAGING

: 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS

: 300° – 350°C for 2 hours

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	Maxflux SAF-223 Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17/ 5.23 F7A4EH-14, F7A4EM-12K, F8A2EA2-A2

CHARACTERISTICS: Maxflux SAF-223 is a basic type flux for high-speed longitudinal welding giving smooth & shiny weld bead along with easy slag removal characteristics. The flux is also suitable for multi-wire submerged arc welding applications and supports to achieve higher throat thickness in welding of fillet joints due to higher current carrying capacity.

APPLICATIONS: Maxflux SAF-223 is suitable for single & multi-layer welding of pressure vessel grade steels (EN 10028-2), X-42 to X-70 grade pipes conforming to API-5L specification, etc.

ALL-WELD ANALYSIS, WT %:

	C	Mn	Si	S	P	Mo	Cu
Autotherme Grade B	0.07	1.00	0.25	0.022	0.025	–	0.15
Autotherme Grade C	0.10	1.40	0.38	0.020	0.023	–	0.15
Autotherme Grade F	0.07	1.38	0.59	0.018	0.022	0.47	0.15

ALL-WELD MECHANICAL PROPERTIES:

	UTS (MPa)	0.2% YS (MPa)	%EL (L=4d)	CVN Impact, J at	
				-29°C	-40°C
Autotherme Grade B	510	440	30	78	45
Autotherme Grade C	580	505	28	80	50
Autotherme Grade F	620	530	27	85	–

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
10%	40%	30%	20%

BASICITY INDEX : ~1.6

GRAIN SIZE : 0.20 – 1.50 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN 2017 (Rev.: 04)	

	Maxflux SAF-223(Mod) Agglomerated Basic flux for Submerged Arc Welding	
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CODIFICATION: AWS SFA 5.17/ 5.23 F7A5EH-14, F7A5EM-12K, F8A4EA2-A2

CHARACTERISTICS: Maxflux SAF-223 (Mod) is a basic type flux for high speed welding of longitudinal pipe giving smooth & shiny weld bead with improved impact toughness properties. The flux is also suitable for multi-wire submerged arc welding applications and supports to achieve higher throat thickness in welding of fillet joints due to higher current carrying capacity.

APPLICATIONS: Maxflux SAF-223 (Mod) is suitable for single & multi-layer welding of pressure vessel grade steels (EN 10028-2), X-42 to X-70 grade pipes conforming to API-5L specification, etc.

ALL-WELD ANALYSIS, WT %:		C	Mn	Si	S	P	Mo
	Autotherme Grade B	0.065	1.55	0.52	0.017	0.025	-
	Autotherme Grade C	0.10	1.40	0.38	0.020	0.023	-
	Autotherme Grade F	0.07	1.31	0.59	0.018	0.022	0.47
ALL-WELD MECHANICAL PROPERTIES:		UTS (MPa)	0.2% YS (MPa)	%EL (L=4d)	CVN Impact (J) at		
					-29°C	-40°C	-46°C
	Autotherme Grade B	550	455	27	-	-	60
	Autotherme Grade C	572	460	26	80	60	40
	Autotherme Grade F	630	570	25	50	40	-

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
	10%	40%	30%	20%

BASICITY INDEX: ~1.6

GRAIN SIZE: 0.20 – 1.50 mm

PACKAGING: 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS: 300°-350°C for 2 hours

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JUN 2017 (Rev.: 04)	



Maxflux SAF-223(Spl)

Agglomerated basic flux for Submerged Arc Welding



CODIFICATION:

AWS: SFA 5.17/ 5.23 F7A2EL8, F7A4/ A5-EM12K, F8A2-EA2-A2, F7A4/P4EH14

CHARACTERISTICS:

Maxflux SAF-223 (SPL) is an agglomerated basic type flux for high-speed longitudinal welding giving smooth bead and easy slag removal characteristics. The flux is also suitable for Tandem, multi-wire submerged arc welding applications and supports to achieve higher throat thickness in welding of fillet joints due to higher current carrying capacity.

APPLICATIONS:

Maxflux SAF-223 (SPL) is suitable for Tandem single & multi-layer welding of pressure vessel grade steels (EN 10028-2), pipes conforming to X-42 to X-70 grade of API 5L, Grade 1/2/3 of ASTM A252, SA 516 Grade 70, Grade A/B of A53 & A523 specification, etc. Suitable for AC and DC welding.

ALL-WELD ANALYSIS, WT. %:

Autotherme Gr A (EL8)
Autotherme Gr B (EM12K)
Autotherme Gr C (EH14)
Autotherme Gr F (EA2)

C	Mn	Si	S	P	Mo	Cu
0.060	0.90	0.22	0.025	0.025	-	0.15
0.065	1.1	0.28	0.024	0.025	-	0.15
0.059	1.82	0.30	0.010	0.030	-	0.16
0.07	1.38	0.60	0.020	0.022	0.48	0.15

ALL-WELD MECHANICAL PROPERTIES:

Autotherme Gr A (EL8)
Autotherme Gr B (EM12K)
Autotherme Gr C (EH14) (AW)
Autotherme Gr C (EH14) (PW)
(After PWHT at 620°C/1 hour)
Autotherme Gr F (EA2)

UTS (MPa)	0.2% YS (MPa)	EL (L=4d) %	CVN Impact. J at		
			-29°C	-40°C	-46°C
520	435	31	64	-	-
540	445	30	85	65	52
536	435	29	-	62	-
526	418	30	-	78	-
620	536	26	75	-	-

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
14%	38%	26%	22%

Basicity Index : ~1.6

Grain Size : 0.35 – 1.20 mm

Packaging : 25 kg poly-lined paper bag

Re-drying Conditions : 300° - 350°C for 2 hours

An ISO 9001: 2008 COMPANY

D&H Sécheron Electrodes Private Limited

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OCT 2017 (Rev.: 07)

	Maxflux SAF - 704 Submerged Arc Welding Flux for Composite Wires	
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CHARACTERISTICS:

Maxflux SAF-704 is a fluoride-basic type flux suitable to weld with composite SAW wires. The flux is neutral in nature and is also suitable with all HF (hard facing) class wires. The deposited weld metal has low diffusible hydrogen content and crack resistant during hard surfacing.

APPLICATIONS:

Maxflux SAF-704 flux suited with composite SAW wires. With ECNi2 wire the weld metal gives excellent mechanical and charpy V-notch impact properties (40-70J at -51°C). For hard surfacing application on steel mill rolls, the flux is suitable with Maxfil HF-20, Maxfil HF-30, Maxfil HF-45 & Maxfil HF-55 wires depending upon the composition & hardness requirement. Recommended welding procedure shall be followed as in our product literature.

ALL WELD METAL COMPOSITION (WITH MAXFLUX SAF-704 FLUX):

Wire	C	Mn	Si	Cr	Ni	Mo	N
Autotherme Gr HC	0.05-0.10	1.0-1.6	0.30-0.70	-	2.0-2.9	-	-
Maxfil HF-20	0.08 max	0.50-1.20	0.60 max	1.2-2.0	2.0-3.0	0.40-0.80	0.06-0.15
Maxfil HF-30	0.20 max	0.50-1.20	0.60 max	4.0-8.0	2.0-4.0	0.40-0.80	0.06-0.15
Maxfil HF-45	0.10-0.30	0.80-1.60	0.80 max	11.0-14.0	3.0-4.5	0.40-0.80	0.06-0.15
Maxfil HF-55	0.30-0.60	1.0-2.0	0.80 max	4.0-6.0	0.50-1.0	0.50-1.0	0.06-0.15

ALL WELD METAL PROPERTIES (WITH MAXFLUX SAF-704 FLUX):

Wire	YS, MPa	UTS, MPa	EL (L=4d), %	Hardness 3L, HRC
Autotherme Gr HC	470-600	550-700	24.0-27.0	-
Maxfil HF-20	-	-	-	23-28
Maxfil HF-30	-	-	-	30-40
Maxfil HF-45	-	-	-	42-48
Maxfil HF-55	-	-	-	52-54

BASICITY INDEX: : 1.80-3.40

DE TAP DENSITY: : 1.10-1.40 gm/cc

GRAIN SIZE: : (+5BSS): 0%,(-10,+44 BSS):90-95%,(-100 BSS): 0-2%

PACKAGING: : 25 Kg Poly-lined Paper Bag

RE-DRYING CONDITIONS: : 300-350°C for one hour

An ISO 9001: 2008 COMPANY

D&H Sécheron Electrodes Private Limited

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JUN 2017 (Rev.: 03)

	Maxflux SAF-723 Agglomerated basic flux for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.23 / F8P2EA4-A4, F8A4/F7P4-EA3-A3

CHARACTERISTICS: Maxflux SAF- 723 is an agglomerated flux to weld structural steels. The weld metal possesses good CVN toughness & produces smooth beads and excellent slag detachability. The weld metal gives very less diffusible hydrogen (<5 ml/100gms. of W.M.).

APPLICATIONS: Maxflux SAF-723 is suitable for single & multilayer welding of various structural, pressure vessels & other fabrication steels. Especially suitable for welding of ASTM steels: A204 Grade A, A516 Gr. B, C & IS 2002 type B, API Gr. 5L X60-X 80 etc.

ALL WELD ANALYSIS, WT %:

WITH	ELEMENTS	C	Mn	Si	S	P	Mo	Cu
AUTOTHERME GRADE-J	TYPICAL	0.075	1.54	0.18	0.018	0.023	0.48	0.15
AUTOTHERME GRADE-U	TYPICAL	0.07	1.65	0.36	0.014	0.017	0.56	0.17

ALL WELD MECHANICAL PROPERTIES:

DETAILS	PWHT	UTS (MPa)	0.2%YS (MPa)	%EI (L=4d)	CVN Impact (J)		
					-20°C	-30°C	-40°C
AUTOTHERME GRADE-J	620°C FOR 1 HR	608.0	528.0	27.2	105	88	-
AUTOTHERME GRADE-U	AW	620.0	550.0	22.2	-	-	> 27
	620°C FOR 1 HR	590.0	510.0	23.4	-	-	50

BASICITY INDEX : ~ 2.3

GRAIN SIZE : 0.35-1.20 mm

PACKAGING : 25 Kg Poly-lined paper bag

RE-DRYING CONDITION : 300°C-350°C for 2 Hours.

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	Maxflux SAF-723 Agglomerated basic flux for Submerged Arc Welding	
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CLASSIFICATION: AWS: SFA 5.23 / F8P2EA4-A4, F8A4/F7P4-EA3-A3

CHARACTERISTICS: Maxflux SAF- 723 is an agglomerated flux to weld structural steels. The weld metal possesses good CVN toughness & produces smooth beads and excellent slag detachability. The weld metal gives very less diffusible hydrogen (<5 ml/100gms. of W.M.).

APPLICATIONS: Maxflux SAF-723 is suitable for single & multilayer welding of various structural, pressure vessels & other fabrication steels. Especially suitable for welding of ASTM steels: A204 Grade A, A516 Gr. B, C & IS 2002 type B, API Gr. 5L X60-X 80 etc.

ALL WELD ANALYSIS, WT %:

WITH	ELEMENTS	C	Mn	Si	S	P	Mo	Cu
AUTOTHERME GRADE-J	TYPICAL	0.075	1.54	0.18	0.018	0.023	0.48	0.15
AUTOTHERME GRADE-U	TYPICAL	0.07	1.65	0.36	0.014	0.017	0.56	0.17

ALL WELD MECHANICAL PROPERTIES:

DETAILS	PWHT	UTS (MPa)	0.2%YS (MPa)	%EI (L=4d)	CVN Impact (J)		
					-20°C	-30°C	-40°C
AUTOTHERME GRADE-J	620°C FOR 1 HR	608.0	528.0	27.2	105	88	-
AUTOTHERME GRADE-U	AW	620.0	550.0	22.2	-	-	> 27
	620°C FOR 1 HR	590.0	510.0	23.4	-	-	50

BASICITY INDEX : ~ 2.3

GRAIN SIZE : 0.35-1.20 mm

PACKAGING : 25 Kg Poly-lined paper bag

RE-DRYING CONDITION : 300°C-350°C for 2 Hours.

An ISO 9001: 2008 COMPANY D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com JUN 2017 (Rev.: 03)

	Maxflux SAF-WB36 Agglomerated basic flux for welding of 1% Ni-0.5%Mo Steel	
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CODIFICATION: **AWS: SFA5.23 / F9A2EG-G**

CHARACTERISTICS: Maxflux SAF WB36 is an agglomerated submerged arc welding flux. The weld metal displays excellent crack resistance and produce sound weld metal possessing excellent strength combines with good impact properties at sub-zero temperature. Slag detachability is good & deposited weld metal is of radiographic quality.

APPLICATIONS: Maxflux SAF WB36 is suitable for both single & multilayer welding application for high strength construction steel. It is mainly used for standard carbon steels ASTM A335 P36 & their equivalent grades.

ALL WELD ANALYSIS, WT. %.

With Autotherme Grade-WB36	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
	0.080	1.1	0.42	0.012	0.028	0.18	1.1	0.35	0.76

All Weld Mechanical Property (As weld condition)

With Autotherme Grade WB36	UTS (MPa)	0.2%YS (MPa)	%El. (L=4d)	Impact CVN (J) -29°C
	680	580	20	50

BASICITY INDEX : ~1.7

GRAIN SIZE : 0.3-1.6mm

PACKING : 25 Kg poly-lined paper bag

RE-DRYING CONDITIONS : 300 – 350°C for 2 hours

An ISO 9001: 2008 certified company D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com JUN 2017 (Rev.: 03)

	Maxflux SS-4 Agglomerated Flux for Submerged Arc Welding	
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CHARACTERISTICS:

Maxflux SS-4 is a fluoride basic agglomerated type flux suitable for welding of austenitic stainless steel and heat resistant steels. The flux behavior to carbon content of the weld metal is neutral. So, using suitable wire, low carbon stainless steels can easily be welded. The flux offers good slag detachability, smooth weld finish and less than 5ml diffusible hydrogen per 100 gm of weld metal.

APPLICATIONS:

Maxflux SS-4 flux can be used with various stainless steel wires for joining & for overlay applications. The flux is also suitable with various Cr- Mo steels & stabilized grade stainless steel. With AISI 430 wire the weld metal result 30-40 HRC.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	Cr	Ni	Mo	Cu	S	P
With Autotherme Grade 430 wire	0.05	0.50	0.35	16.3	-	-	0.30	0.012	0.025
With Autotherme Grade 308 wire	0.05	1.20	0.35	20.5	9.8	-	0.30	0.012	0.025
With Autotherme Grade 309 wire	0.05	1.50	0.35	24.0	12.5	-	0.30	0.012	0.025
With Autotherme Grade 312 wire	0.07	1.40	0.35	28.8	10.1	-	0.30	0.012	0.025
With Autotherme Grade 316 wire	0.05	1.20	0.35	18.5	12.5	2.30	0.30	0.012	0.025

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
20%	30%	20%	25%

BASICITY INDEX : ~2.0

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN 2017 (Rev.: 05)

	Maxflux SS-4 (LT) Agglomerated flux for Submerged Arc Welding	
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CHARACTERISTICS:

Maxflux SS-4 (LT) is a fluoride basic agglomerated type flux suitable for welding of austenitic stainless steel and heat resistant steels. The flux behavior to carbon content of the weld metal is neutral. So, using suitable wire, low carbon stainless steels can easily be welded. The flux offers good slag detachability, smooth weld finish and less than 5ml diffusible hydrogen per 100 gm of weld metal.

APPLICATIONS:

Maxflux SS-4 flux (LT) can be used with various low carbon stainless steel wires for joining & for overlay applications. Weld metal meet impact toughness at -196°C requirements. The flux is also suitable to weld with various Cr-Mo steels & stabilized grade stainless steels.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	Cr	Ni	Mo	Cu	S	P
With Autotherme Grade 308L wire	0.03	1.20	0.35	20.5	9.8	-	0.30	0.030	0.025
With Autotherme Grade 316L wire	0.03	1.20	0.35	18.5	12.5	2.30	0.30	0.030	0.025

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
20%	30%	20%	25%

BASICITY INDEX : ~2.0

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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	Mergearc Grade-J <i>Copper coated solid wire for Submerged Arc Welding</i>	
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CLASSIFICATION: AWS: SFA 5.23
EA4

CHARACTERISTICS & APPLICATIONS:

Mergearc Grade-J is manganese & molybdenum alloyed copper coated wire for the submerged arc welding of medium and high strength structural steels. Mergearc Grade-J should preferably be used together with non-alloying or slightly alloying fluxes.

CHEMICAL COMPOSITION OF SOLID WIRE, WT. %:

Element	C	Mn	Si	S	P	Mo	Cu
Range	0.05-0.15	1.20-1.70	0.20 Max	0.025 Max	0.025 Max	0.45-0.65	0.35 Max

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, WT. %:

MERGEARC	Element	C	Mn	Si	S	P	Mo	Cu
SAF-723	Typical	0.075	1.54	0.48	0.018	0.023	0.48	0.15

MECHANICAL PROPERTIES OF WELD METAL:
(PWHT AT 620°C FOR TWO HOURS)

MERGEARC	Property	0.2%YS (MPa)	UTS (MPa)	EI(L=4d) (%)	CVN Impact (J) at	
					-20°C	-30°C
SAF-723	Typical	528	608	27.2	105	88

PACKING:	STANDARD SIZE	Diameter 2.5mm, 3.2mm & 4.0 mm
	QUANTITY	➤ 25 kg wire in metallic ring. ➤ Identification-Brand name & size is printed on label. ➤ Packed in corrugated cardboard box. ➤ 100Kg, 250kg, 500Kg & 750kg Drum Packing also available on request.

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April 06, 2017 (Rev.: 00)

	Maxflux HF - 250	
	Agglomerated hard-surfacing flux for Submerged Arc Welding	

CHARACTERISTICS:

Maxflux HF-250 is a hard surfacing type flux suitable for moderate abrasion resistance applications in combination with EL-8 grade (Autotherme Grade A) wire. Slag removal is easy and weld bead is smooth & shiny. The deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux HF-250 is suitable for surfacing of tractor rollers, excavator parts, tracks lines, crane wheels, etc.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade A (Gr: EL-8)

C	Mn	Si	Cr	Mo	Cu
0.12	0.9	0.65	2.1	0.15	0.15

**ALL-WELD METAL HARDNESS
(AS- WELD):**

Autotherme Grade A (Gr: EL-8)

Hardness on MS plate - 1 st layer	Hardness on MS plate - 2 nd layer	Hardness on MS plate - 3 rd layer
-	240-260 BHN	240-270 BHN

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
25%	5%	50%	25%

BASICITY INDEX : ~0.7

GRAIN SIZE : 0.40 – 2.0 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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	Maxflux HF - 350	
	Agglomerated hard-surfacing flux for Submerged Arc Welding	

CHARACTERISTICS:

Maxflux HF-350 is a hard surfacing type flux suitable for moderate abrasion resistance applications in combination with EL-8 grade (Autotherme Grade A) wire. Slag removal is easy and weld bead is smooth & shiny. The deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux HF-350 is suitable for surfacing of tractor rollers, excavator parts, tracks lines, crane wheels, etc.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade A

C	Mn	Si	Cr	Mo	Cu
0.23	1.0	0.65	3.2	0.20	0.15

**ALL-WELD METAL HARDNESS
(AS- WELD):**

Autotherme Grade A

Hardness on MS plate - 1 st layer	Hardness on MS plate - 2 nd layer	Hardness on MS plate - 3 rd layer
260-290 BHN	340-360 BHN	340-370 BHN

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
25%	5%	50%	25%

BASICITY INDEX : ~0.7

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN, 2017 (Rev.: 04)

	Maxflux LAB-223 Agglomerated Basic flux for Multi Wire Submerged Arc Welding	
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CODIFICATION: AWS SFA 5.17/ 5.23 F7A2/A4EM-12K, F7A2/A4EH-14

CHARACTERISTICS: Maxflux LAB-223 is a basic type flux for high speed longitudinal welding giving smooth & shiny weld bead along with easy slag removal characteristics. The flux is suitable for multi-wire submerged arc welding applications and supports to achieve higher throat thickness in welding of fillet joints due to higher current carrying capacity.

APPLICATIONS: Maxflux LAB-223 is suitable for both single & multi-layer welding of structural steels, boiler & pressure vessel quality steels and other fabrication involving medium tensile & low alloy steel.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	S	P
Autotherme Grade B	0.07	1.10	0.25	0.022	0.025
Autotherme Grade C	0.09	1.45	0.42	0.021	0.023

ALL-WELD MECHANICAL PROPERTIES:	UTS (MPa)	0.2% YS (MPa)	%EL (L=4d)	CVN Impact (J) at	
				-29°C	-40°C
Autotherme Grade B	510	440	30	78	45
Autotherme Grade C	560	505	28	80	66

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
	10%	40%	30%	20%

BASICITY INDEX: ~1.6

GRAIN SIZE: 0.30 – 1.60 mm

PACKAGING: 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS: 300°-350°C for 2 hours

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JUN. 2017 (Rev.: 03)	

	Maxflux SAF-2 Agglomerated Acidic Flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7AZEL-8, F7A0EM-12K

CHARACTERISTICS: Maxflux SAF-2 is an alumina-rutile type acidic flux to weld medium tensile structural steels. The slag is easily removable and bead finish is smooth & shiny. Weld deposit is of radiographic quality.

APPLICATIONS: Maxflux SAF-2 is suitable for single and multi layer welding of various structural & pressure vessel steels like; IS:2062, Gr.516 Gr.60, ASTM A285 Gr. C, ASTM A-36, BS:1501-151 Gr.400, machine building and fabrication of earthmoving equipment, crane girders, ships, locomotives, etc.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	S	P	Cu
Autotherme Grade A	0.05	1.10	0.35	0.027	0.028	0.15
Autotherme Grade B	0.07	1.25	0.50	0.028	0.026	0.15

ALL-WELD MECHANICAL PROPERTIES:	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at		
				RT	0°C	-20°C
Autotherme Grade A	410	500	26	55	30	–
Autotherme Grade B	418	510	25	60	40	30

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
	25%	5%	50%	25%

BASICITY INDEX : ~0.7

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kg. poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN, 2017 (Rev.: 04)

	Maxflux SAF-3 Agglomerated Acidic Flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7A0EL8, F7A0EM12K

CHARACTERISTICS: Maxflux SAF-3 is an alumina-rutile type acidic flux to weld medium tensile structural steels. The slag is easy to remove and the weld deposit is of radiographic quality.

APPLICATIONS: Maxflux SAF-3 is suited for fabrication and welding of penstock pipelines, pressure vessels, earthmoving equipment, off-shore platforms, boilers, rail & crane girders, machine building, locomotive works, etc.

ALL-WELD ANALYSIS, WT %:

	C	Mn	Si	S	P	Cu
Autotherme Grade A	0.05	1.20	0.45	0.027	0.028	0.15
Autotherme Grade B	0.07	1.35	0.50	0.028	0.026	0.15

ALL-WELD MECHANICAL PROPERTIES:

	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at	
				0°C	-20°C
Autotherme Grade A	410	500	26	55	30
Autotherme Grade B	418	510	25	60	40

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
20%	10%	45%	25%

BASICITY INDEX : ~0.7

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

An ISO 9001: 2008 COMPANY	
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JUN 2017 (Rev.: 04)	

	Maxflux SAF- 4 Agglomerated Basic Flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F6A2-EL8, F7A2-EM12K, F7A4-EM12K, F7A4-EH14

CHARACTERISTICS: Maxflux SAF-4 is a basic type flux having very good performance with good sub-zero impact properties & extreme resistance to cracking. It is neutral in terms of silicon and manganese pick-up. Slag is easily removable and bead finish is smooth & shiny. The diffusible hydrogen content of the weld metal is low.

APPLICATIONS: Maxflux SAF-4 is suitable for single & multi-layer welding of structural steels, pressure vessels, boilers and other fabrications involving medium tensile & low alloy steel.

ALL-WELD ANALYSIS, WT %:

	C	Mn	Si	S	P	Cu
Autotherme Grade A	0.05	0.60	0.30	0.028	0.027	0.15
Autotherme Grade B	0.06	1.00	0.35	0.028	0.026	0.15
Autotherme Grade C	0.06	1.50	0.38	0.028	0.027	0.15

ALL-WELD MECHANICAL PROPERTIES:

	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at		
				-18°C	-29°C	-40°C
Autotherme Grade A	380	460	26	40	30	–
Autotherme Grade B	415	510	25	70	60	34
Autotherme Grade C	418	530	26	90	75	45

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
20%	25%	20%	35%

BASICITY INDEX : ~1.6

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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	Maxflux SAF- 4 (PW) Agglomerated Basic Flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7A4/P4EM12K, F8A4/F7P5EH14

CHARACTERISTICS: Maxflux SAF-4 (PW) is a basic type flux having very good performance with good sub-zero impact properties & extreme resistance to cracking. The flux is especially designed to meet the tensile & Impact requirements after post weld heat treatment condition at 620⁰ C. slag is easily removable & bead finish is smooth & shiny. The diffusible hydrogen content of the weld metal is low.

APPLICATIONS: Maxflux SAF-4 (PW) is suitable for single & multi-layer welding of structural steels, pressure vessels, boilers and other fabrications involving medium tensile & low alloy steel.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	S	P
Autotherme Grade B	0.06	1.24	0.51	0.021	0.023
Autotherme Grade C	0.07	1.60	0.42	0.023	0.025

ALL-WELD MECHANICAL PROPERTIES:	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at		
				-29°C	-40°C	-46°C
Autotherme Grade B (As welded)	486	537	28	106	78	
Autotherme Grade C (As welded)	506	568	28	94	68	48
Autotherme Grade B (PWHT620°C for 2 hrs)	450	512	30	103	66	
Autotherme Grade C (PWHT620°C for 2 hrs)	462	523	31	135	96	56

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
	22%	23%	21%	34%

BASICITY INDEX : ~1.5

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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JUN 2017(Rev.: 01)

	Maxflux SAF- 4 (Spl) Agglomerated Basic Flux for Submerged Arc Welding	
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CODIFICATION:

AWS: SFA 5.17 F7A4EM-12K, F7A4/ P4EH-14, F7A4/ P4EH-10K

CHARACTERISTICS:

Maxflux SAF-4 (Spl) is a basic type flux giving good sub-zero impact properties and resistance to cracking. Slag detachability is very good with smooth & shiny bead finish. The diffusible hydrogen content of weld metal is low & satisfies radiographic quality requirements.

APPLICATIONS:

Maxflux SAF-4 (Spl) is suitable for single & multi-layer welding of structural steels, pressure vessels, boilers and other fabrications involving medium tensile & low alloy steel.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade B
Autotherme Grade C
Autotherme Grade E

C	Mn	Si	S	P	Cu
0.06	1.32	0.25	0.028	0.026	0.15
0.06	1.58	0.22	0.028	0.027	0.15
0.06	1.46	0.28	0.012	0.015	0.15

ALL-WELD MECHANICAL PROPERTIES:

Autotherme Grade B
Autotherme Grade C
Autotherme Grade C (after SR at 620°C/1hr)
Autotherme Grade E
Autotherme Grade E (after SR at 620°C/1hr)

0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at		
			-18°C	-29°C	-40°C
475	528	25	80	70	40
488	545	26	100	80	50
464	517	29	106	78	60
490	536	26	120	86	62
474	508	28	107	84	65

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
20%	25%	20%	35%

BASICITY INDEX

: ~1.8

GRAIN SIZE

: 0.35 – 1.60 mm

PACKAGING

: 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS

: 300°-350°C for 2 hours

An ISO 9001: 2008 COMPANY
D&H Sécheron Electrodes Private Limited

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JUN 2017 (Rev.: 05)

CODIFICATION: AWS A5.17: F7A4/ P4-EH14, F7A5/ P5-EH10K
AWS A5.23: F8A4/ P4-EA2-A2 & EA3-A3, F9A4/ P2-EF3-F3, F10A4/ F9P5-EM-4-M4

CHARACTERISTICS: Maxflux SAF-4 (UV) is an agglomerated fluoride basic flux suitable to weld medium to high strength steels & low alloy steels. The weld made with this flux gives very low diffusible hydrogen content, good crack resistance and high sub-zero toughness properties. The flux provides uniform fusion in fillet welds & butt welds with excellent slag detachability. The flux can be used for multi-pass welding. The deposits are of radiographic quality and have less than 4ml diffusible hydrogen/ 100gms of weld metal.

APPLICATIONS: Maxflux SAF-4 (UV) is suitable for single & multilayer welding of various structural, Boiler, Pressure vessel steels, Petrochemical industries, Refineries, Shipping, Quenched & tempered steel, heat resistant steels, Nuclear sector fabrications & other fabrication industries.

CHEMISTRY OF WIRE/ WELD METAL, (WT. %):

Details	AWS class	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Autotherme Gr-C (wire)	EH-14	0.1-0.2	1.7-2.2	0.1	0.03	0.03	-	-	-	0.35
Autotherme Gr-E (wire)	EH-10K	0.07-0.15	1.3-1.7	0.05-0.25	0.025	0.025	-	-	-	0.35
Autotherme Grade-F	EA-2	0.12	1.4	0.8	0.03	0.03	-	-	0.4-0.65	0.35
Autotherme Grade-U	EA-3	0.15	2.1	0.8	0.03	0.03	-	-	0.4-0.65	0.35
Autotherme Grade-P	EF-3	0.17	1.25-2.25	0.8	0.03	0.03	-	0.7-1.1	0.4-0.65	0.35
Autotherme Grade-Q	EM-4	0.1	1.3-2.25	0.8	0.02	0.02	0.8	2.0-2.8	0.3-0.8	0.30

MECHANICAL PROPERTIES:

Details	PWHT	UTS (MPa)	0.2 % YS (MPa)	% EL (L=4d)	CVN Impact at °C (J)		
					-29°C	-40°C	-46°C
Autotherme Grade-C	As-weld	582	494	23	-	120	-
Autotherme Grade-C	620°C for 1hr	536	453	32	-	132	-
Autotherme Grade-E	As-weld	570	484	30	-	110	72
Autotherme Grade-E	620°C for 1hr	537	463	31	-	148	68
Autotherme Grade-F	As-weld	612	535	30	-	105	-
Autotherme Grade-F	620°C for 1hr	594	482	31	-	126	-
Autotherme Grade-U	As-weld	612	510	27	-	134	-
Autotherme Grade-U	620°C for 1hr	597	477	37	-	142	-
Autotherme Grade-P	As-weld	675	535	28	-	120	-
Autotherme Grade-P	620°C for 1hr	660	554	28	46	-	-
Autotherme Grade-Q	As-weld	793	665	20	-	62	-
Autotherme Grade-Q	590°C for 3hrs	777	675	20	-	78	58

GRAIN SIZE: 0.15-1.6 mm

PACKAGING: 25 kg Poly-lined paper bag

RE-DRYING CONDITIONS: 350°C for 2 hours

An ISO 9001: 2008 certified company

D&H Sécheron Electrodes Private Limited

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December.2016 (Rev.: 02)

	Maxflux SAF-5 Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION: AWS: SFA 5.17 F7A4EM-12K, F7A5EH-14, F7A5EH-10K

CHARACTERISTICS: Maxflux SAF-5 is a basic type flux for welding general structural steels, pressure vessel steels, pipe steels, micro-alloyed (BIS: 8500) & fine grained steels. Recommended to use with high Mn wires (like EM12K and EH14) for better impact properties. Slag detachability is good. Weld is of radiographic quality with very low diffusible hydrogen content.

APPLICATIONS: Maxflux SAF-5 is suitable for single & multi-layer welding of structural welding, pressure vessels, boilers and other fabrications involving medium tensile & low alloy steel.

ALL-WELD ANALYSIS, WT %:	C	Mn	Si	S	P	Cu
Autotherme Grade B	0.07	1.00	0.25	0.020	0.025	0.15
Autotherme Grade C	0.08	1.50	0.20	0.021	0.026	0.15
Autotherme Grade E	0.07	1.20	0.25	0.018	0.022	0.15

ALL-WELD MECHANICAL PROPERTIES:	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at		
Autotherme Grade B	412	492	32	-29°C	-40°C	-46°C
Autotherme Grade C	428	530	29	80	50	—
Autotherme Grade E	415	520	30	90	65	45
Autotherme Grade E	415	520	30	90	75	50

MAJOR CONSTITUENTS:	SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CaF ₂
	10%	40%	30%	20%

BASICITY INDEX : ~1.6

GRAIN SIZE : 0.35 – 1.60 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

An ISO 9001: 2008 COMPANY	
D&H Sécheron Electrodes Private Limited 44-46, Industrial Estate, Kila Maidan, Indore-452 006, India, Ph: 0731 2412331-2, 4229222 Fax: 0731 4229260 E-mail: tsd@dnhsecheron.net Website: www.dnhsecheron.com	
JUN 2017 (Rev.: 04)	



Maxflux SAF-7S

Agglomerated Acidic Flux for Submerged Arc Welding



CODIFICATION:

AWS: SFA 5.17 F7AZ-EL8, F7A0-EM12K

CHARACTERISTICS:

Maxflux SAF-7S is a high speed welding acidic flux for spiral pipe welding. The flux is suitable for single & multi-pass welding with single wire & multi-wire applications in both AC & DC polarity. Slag detachability is good and deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux SAF-7S is suited for fabrication and welding of spiral pipes, smaller diameter pipes (internal and external), penstock pipelines, wind mill towers, pressure vessels, girder, earthmoving equipment, structures of off-shore platforms, etc.

ALL-WELD ANALYSIS, WT %:

	C	Mn	Si	S	P	Cu
Autotherme Grade A	0.05	1.30	0.60	0.025	0.024	0.15
Autotherme Grade B	0.06	1.55	0.75	0.027	0.020	0.15

ALL-WELD MECHANICAL PROPERTIES:

	0.2% YS MPa	UTS MPa	EL (L=4d) %	Impact, J at	
				-18°C	-29°C
Autotherme Grade A	480	550	23	40	—
Autotherme Grade B	535	580	23	50	32

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
20%	5%	55%	15%

BASICITY INDEX : ~0.5

GRAIN SIZE : 0.20 – 1.50 mm

PACKAGING : 25 kgs poly-lined paper bag

RE-DRYING CONDITIONS : 300°-350°C for 2 hours

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D&H Sécheron Electrodes Private Limited

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MAY 2018 (Rev.: 06)

	Maxflux SAF -7X Agglomerated acidic flux for Submerged Arc Welding.	
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ODIFICATION:
AWS: SFA 5.17 F7AZEL8, F7A0EM12K
CHARACTERISTICS:

Maxflux SAF-7X is an acidic flux for longitudinal & spiral high speed pipe welding applications. The flux is suitable for single & multi-pass welding with single wire & multi-wire applications in both AC & DC polarity. Slag detachability is good and deposited weld metal is of radiographic quality.

APPLICATIONS:

Maxflux SAF-7X is suited for fabrication and welding of longitudinal pipe, spiral pipes, penstock pipelines, wind mill towers, pressure vessels, girder, earthmoving equipment, structures of off-shore platforms, etc.

ALL WELD ANALYSIS, WT. %:

WITH AUTOTHERME GRADE-A
WITH AUTOTHERME GRADE-B

C	Mn	Si	S	P	Cu
0.05	1.30	0.56	0.025	0.024	0.15
0.08	1.55	0.69	0.028	0.026	0.16

**MECHANICAL PROPERTIES OF
ALL WELD METAL AS WELDED CONDITION**

WITH AUTOTHERME GRADE- A
WITH AUTOTHERME GRADE- B

UTS (MPa)	0.2 %YS (MPa)	% EL. (L=4d)	CVN Impact (J) at	
			-18°C	-29°C
530.0	440.0	24.2	40	-
552.0	465.0	28.5	80	52

BASICITY INDEX : ~0.6

GRAIN SIZE : 0.20-1.50 mm

PACKAGING : 25 Kg poly-lined paper bag

RE-DRYING CONDITIONS : 300-350°C for 2 hours.

An ISO 9001 : 2008 certified company

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MAY 2018 (Rev.: 07)

	Maxflux SAF-8 (LS) Agglomerated basic flux for Submerged Arc Welding	
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CODIFICATION:

AWS SFA 5.17/ F7A6/P6/P8-EH10K

CHARACTERISTICS:

Maxflux SAF-8 (LS) is a fluoride-basic type flux suitable to weld medium to high strength steels. The weld metal made with this flux gives very low diffusible hydrogen content, good crack resistance and higher sub-zero toughness properties. The flux is neutral in Mn & Si pick up and meets mechanical requirements after post-weld heat treatment at 620°C up to six hours of holding. The weld deposit is of radiographic quality. The weld metal passes the corrosion tests as per NACE standard TM-01-77 & TM-02-84

APPLICATIONS:

Maxflux SAF-8 (LS) is suitable for single & multi-layer welding of high tensile quenched & tempered steel, fine grained steels, heat resistant structural steels, nuclear sector fabrication, etc.

ALL-WELD ANALYSIS, WT %:

Autotherme Grade- E

C	Mn	Si	S	P	Cu
0.086	1.58	0.36	0.012	0.013	0.15

ALL-WELD MECHANICAL PROPERTIES:

(With Autotherme Grade E wire)

After PWHT at 620°C for 2 hours

After PWHT at 620°C for 6 hours

UTS (MPa)	0.2% YS (MPa)	% EL (L=4d)	CVN Impact (J)at		
			-40°C	-51°C	-62°C
535	438	30.0	105	86	72
511	427	32.0	128	115	106

MAJOR CONSTITUENTS:

SiO ₂ + TiO ₂	CaO + MgO	Al ₂ O ₃ + MnO	CAF ₂
10%	48%	17%	25%

BASICITY INDEX

: ~3.4

GRAIN SIZE

: 0.35 – 1.60 mm

PACKAGING

: 25 kgs poly-lined printed paper bag

RE-DRYING CONDITIONS

: 300°-350°C for 2 hours

An ISO 9001: 2008 COMPANY
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JUN 2017 (Rev.: 06)