Exaton 15W

Exaton 15W is a basic welding flux for submerged arc welding giving good slag removal and a fine bead appearance. It delivers high performances in many joining applications in the chemical, petrochemical and oil&gas industry. Taking the benefit of its features (not limited to nice bead appearance and self slag release only), it can also be used in combination with Ni-based wires for several other applications (i.e. both joining and weld overlay). Exaton Ni56 is a low carbon nickel-chrome-molybdenum alloy of type alloy C-276. It is a versatile alloy with excellent wet corrosion resistance in oxidizing and especially in reducing media; and it can also be used for dissimilar metal joining of nickel alloys, stainless steels and low-alloy steels. Applications are found in cryogenic (including 5/9%Ni steels in LNG tanks), components in pulp and paper plants such as bleaching vessels, flue gas scrubber systems, components in sour-gas service, sulphuric acid coolers, chlorine gas, hypochlorite and chlorine dioxide atmosphere.

Dane techniczne	
Klasyfikacje	EN ISO 14174 : S A AF 2
Aprobaty	CE : EN 13479 UKCA : EN 13479

Zatwierdzenia s oparte na lokalizacji fabryki. Aby uzyska wicej informacji, skontaktuj si z ESAB.

Prd spawania	1200 A (Using 60x0.5 mm strip)
Typ ulu	Fluoride basic CaF2-Al2O3-SiO2
Gsto	nom: 1.0 Kg/l
Wskanik zasadowoci	nom: 1.9

Zuycie topnika	
V	**Zuycie topnika / 1 kg(2,2 lb) drutu DC+**
34 V	0.8 kg
30 V	0.6 kg
26 V	0.5 kg
38 V	1.0 kg

Warunki : Wymiar 4.0 mm , A 580 A , Prdko jazdy 33 m/h

Klasyfikacje		
Drut	**AWS/EN**	**AWS - stan po spawaniu**
Exaton 16.5.1	14343-A:S 16 5 1	-
Exaton 19.12.3.L	A5.9:ER316L/ 14343-A:S 19 12 3 L	A5.39: F75A15-ER316L/316L
Exaton 19.12.3.LCRYO	A5.9:ER316L/ 14343-A:S (19 12 3 L); 14343-B: SS316L	-
Exaton 19.9.L	A5.9:ER308L/ 14343-A:S 19 9 L	-
Exaton 19.9.Nb	A5.9:ER347/ 14343-A:S 19 9 Nb	A5.39: F90A15-ER347/347
Exaton 20.25.5.LCu	A5.9:ER385/ 14343-A:S 20 25 5 Cu L	-
Exaton 22.12.HT	14343-A:S 21 10 N	-
Exaton 22.15.3.L	A5.9:ER309LMo (mod)/ 14343-A:S 23 12 2 L	-
Exaton 22.8.3.L	A5.9:ER2209/ 14343-A:S 22 9 3 N L	A5.39: F115A15-ER2209/2209
Exaton 24.13.LHF	A5.9:ER309L/ 14343-A:S 23 12 L	-
Exaton 24.13.LNb	A5.9:ER309L (mod)/ 14343-A:S 23 12 Nb	-
Exaton 25.10.4.L	A5.9:ER2594/ 14343-A:S 25 9 4 N L	A5.39: F120A8-ER2594/2594
Exaton 25.22.2.LMn	14343-A:S 25 22 2 N L	-
Exaton 27.31.4.LCu	A5.9:ER383/ 14343-A:S 27 31 4 Cu L	-
Exaton Ni56	A5.14:ERNiCrMo-4/ 18274:S Ni 6276 (NiCr15Mo16Fe6W4)	-
Exaton Ni60 SAW	A5.14:ERNiCrMo-3/ 18274:S Ni 6625 (NiCr22Mo9Nb)	-

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Dopuszczenia			
Drut	**BV**	**DNV-GL**	**VdTÜV**
Exaton 19.12.3.L	-	-	•
Exaton 19.9.L	-	-	•
Exaton 19.9.Nb	-	-	•
Exaton 22.8.3.L	•	•	•
Exaton 25.10.4.L	•	•	•

Typowy skad chemiczny stopiwa %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**V**	**Cu**
Exaton 16.5.1									
0.02	0.9	0.7	0.012	0.025	5.5	16	1	-	-
Exaton 19.12.3.L									
0.01	1.5	0.5	0.01	0.02	12.3	18.1	2.6	-	0.08
Exaton 19.12.3.LCRYO									
0.021	1.5	0.5	0.003	0.023	12.8	18	2.3	-	0.07
Exaton 19.9.L									
0.02	1.2	0.6	0.012	0.025	10	19.5	0.15	-	0.1
Exaton 19.9.Nb Current: DC+, 400A, 28V, welding speed 48cm/min									
0.03	1.18	0.5	0.011	0.018	9.3	18.83	0.032	-	0.097
Exaton 19.9.Nb									
-	-	-	-	-	-	-	-	-	-
Exaton 20.25.5.LCu									
0.01	1.4	0.5	-	-	25	19.6	4.5	-	-
Exaton 22.8.3.L Current: DC+, 400A, 28V, 45cm/min									
0.01	1.2	0.004	-	0.018	8.36	22.6	2.95	-	0.12
Exaton 24.13.LNb									
<=0.020	1.2	0.7	<=0.015	<=0.025	12	23.5	-	-	-
Exaton 25.10.4.L									
-	-	-	-	-	-	-	-	0.05	0.1
Exaton 25.10.4.L Current: DC+, 350A, 28V, 48cm/min									
<=0.020	0.3	0.6	<=0.015	<=0.020	9.6	24.5	4	-	-
Exaton 25.22.2.LMn									
0.02	4.0	0.1	-	-	22.0	24.5	2.1	-	0.1
Exaton 27.31.4.LCu									
0.01	1.4	0.4	0.003	0.01	31.3	26.3	3.5	-	1.0
Exaton Ni56									
0.01	0.4	0.20	-	-	Bal	15.1	15.6	0.1	-
Exaton Ni60 SAW									
-	-	-	0.005	0.015	-	-	-	-	0.1
Exaton Ni60 SAW Current: DC+, 400A, 28V, travel speed: 25 m/h.									
0.02	0.2	0.4	-	-	-	22	9	-	-

Typowy skad chemiczny stopiwa %									
N	**Nb**	**Ti**	**Co**	**PRE**	**FN deLong**	**FN WRC**	**FN WRC-92**	**W**	**Fe**
Exaton 16.5.1									
-	-	-	-	-	-	-	-	-	-
Exaton 19.12.3.L									

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Typowy skad chemiczny stopiwa %									
N	**Nb**	**Ti**	**Co**	**PRE**	**FN deLong**	**FN WRC**	**FN WRC-92**	**W**	**Fe**
0.05	-	-	-	-	-	-	9	-	-
Exaton 19.12.3.LCRYO									
0.06	-	-	-	-	-	-	3	-	-
Exaton 19.9.L									
0.05	-	-	0.1	-	-	-	6	-	-
Exaton 19.9.Nb Current: DC+, 400A, 28V, welding speed 48cm/min									
0.063	0.56	-	0.14	-	-	-	-	-	-
Exaton 19.9.Nb									
-	-	-	-	-	6	6	-	-	-
Exaton 20.25.5.LCu									
-	-	-	-	-	-	-	-	-	-
Exaton 22.8.3.L Current: DC+, 400A, 28V, 45cm/min									
0.135	<0.003	-	-	34	-	-	52	-	-
Exaton 24.13.LNb									
-	0.7	-	-	-	-	-	-	-	-
Exaton 25.10.4.L									
-	<0.01	<0.001	0.04	42	-	-	55	<0.01	-
Exaton 25.10.4.L Current: DC+, 350A, 28V, 48cm/min									
0.21	-	-	-	-	-	-	-	-	-
Exaton 25.22.2.LMn									
0.12	-	-	-	-	-	-	-	-	-
Exaton 27.31.4.LCu									
0.06	-	-	-	-	-	-	-	-	-
Exaton Ni56									
-	-	-	0.1	-	-	-	-	3.6	6.8
Exaton Ni60 SAW									
-	-	-	-	-	-	-	-	-	-
Exaton Ni60 SAW Current: DC+, 400A, 28V, travel speed: 25 m/h.									
-	-	-	-	-	-	-	-	-	5

Typowy skad chemiczny stopiwa %
Nb+Ta
Exaton 19.9.Nb Current: DC+, 400A, 28V, welding speed 48cm/min
0.6
Exaton Ni60 SAW
3

Skad drutu %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**V**	**Al**
Exaton 16.5.1									
0.01	1.4	0.3	0.009	0.015	5.5	16.2	1.0	0.04	0.006
Exaton 19.12.3.L									
<0.020	1.8	0.4	<0.015	<0.025	12.5	18.5	2.6	-	-
Exaton 19.12.3.LCRYO									
0.02	1.8	0.4	0.003	0.012	13.3	18.5	2.3	-	0.01
Exaton 19.9.L									
<0.025	1.8	0.4	<0.015	<0.025	10.0	20	<0.5	-	-

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Skad drutu %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**V**	**Al**
Exaton 19.9.Nb									
0.04	1.3	0.35	0.012	0.015	9.5	19.5	0.03	-	-
Exaton 20.25.5.LCu									
<=0.020	1.8	0.4	<=0.015	<=0.015	25	20	4.5	-	-
Exaton 22.12.HT									
0.07	0.5	1.6	0.0007	0.020	10.2	21.0	0.1	-	0.01
Exaton 22.15.3.L									
<=0.025	1.5	0.4	<=0.015	<=0.025	15	21.5	2.7	-	-
Exaton 22.8.3.L									
0.012	1.5	0.5	0.0007	0.018	8.6	23	3.2	0.05	-
Exaton 24.13.LHF									
0.01	1.8	0.4	0.001	0.011	13.4	23.8	0.04	0.05	-
Exaton 24.13.LNb									
0.01	2.1	0.3	0.001	0.013	12.5	24	0.02	-	-
Exaton 25.10.4.L									
0.012	0.4	0.3	0.0005	0.015	9.5	25	4	0.05	-
Exaton 25.22.2.LMn									
<=0.020	4.5	<=0.2	<=0.015	<=0.015	22.0	25.0	2.1	-	-
Exaton 27.31.4.LCu									
0.01	1.7	0.1	0.001	0.012	31.0	27.0	3.5	-	0.04
Exaton Ni56									
0.007	0.5	0.02	0.002	0.005	58	16	16	0.03	-

Skad drutu %									
Cu	**N**	**Nb**	**Ti**	**Co**	**B**	**PRE**	**FN deLong**	**FN WRC**	**FN WRC-92**
Exaton 16.5.1									
0.01	0.02	0.01	0.01	0.03	-	-	-	-	-
Exaton 19.12.3.L									
-	<0.060	-	-	-	-	-	-	-	-
Exaton 19.12.3.LCRYO									
0.06	0.06	0.01	0.005	0.03	-	-	-	-	2
Exaton 19.9.L									
<0.3	<0.08	-	-	<0.20	-	-	-	-	-
Exaton 19.9.Nb									
0.11	0.06	0.6	-	0.1	-	-	5	5	-
Exaton 20.25.5.LCu									
1.5	-	-	-	-	-	-	-	-	-
Exaton 22.12.HT									
0.1	0.17	0.01	0.005	0.05	0.0008	-	9	-	-
Exaton 22.15.3.L									
-	-	-	-	-	-	-	-	-	-
Exaton 22.8.3.L									
0.09	0.15	0.01	0.003	0.04	-	37	-	-	55
Exaton 24.13.LHF									
0.03	0.05	0.03	0.004	0.03	-	-	14	13	-
Exaton 24.13.LNb									
0.01	0.05	0.8	0.005	0.02	-	-	-	-	-

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Skad drutu %									
Cu	**N**	**Nb**	**Ti**	**Co**	**B**	**PRE**	**FN deLong**	**FN WRC**	**FN WRC-92**
Exaton 25.10.4.L									
0.07	0.25	0.01	0.003	0.04	-	42	-	-	50
Exaton 25.22.2.LMn									
0.05	0.13	-	-	-	-	-	-	-	0
Exaton 27.31.4.LCu									
1.0	0.05	0.02	-	0.03	-	-	-	-	-
Exaton Ni56									
0.02	-	-	-	0.02	-	-	-	-	-

Skad drutu %			
Ce	**W**	**Fe**	**Nb+Ta**
Exaton 19.9.Nb			
-	-	-	0.6
Exaton 22.12.HT			
0.04	-	-	-
Exaton 22.8.3.L			
-	0.01	-	-
Exaton 25.10.4.L			
-	0.01	-	-
Exaton Ni56			
-	3.7	5.8	-

Typowe waciwoci mechaniczne					
Drut	**Warunki**	**Granica plastycznoci**	**Wytrzymao na rozciganie**	**Wyduenie wzgldne**	**Udarno KV**
Exaton 16.5.1	PWHT (4 hour(s))	490 MPa	850 MPa	20 %	40 J @ 20 °C
Exaton 19.12.3.L	Po spawaniu ø2.4mm Feed Speed 48cm/min 350A DC+ 28V	390 MPa	545 MPa	42 %	65 J @ -60 °C 52 J @ -110 °C 27 J @ -196 °C
Exaton 19.12.3.LCRYO	Po spawaniu	415 MPa	560 MPa	34 %	88 J @ -60 °C 70 J @ -110 °C 46 J @ -196 °C
Exaton 19.9.L	Po spawaniu	390 MPa	560 MPa	35 %	90 J @ 20 °C 35 J @ -196 °C
Exaton 19.9.Nb	Po spawaniu	470 MPa	640 MPa	39 %	95 J @ 20 °C 40 J @ -110 °C 25 J @ -196 °C
Exaton 20.25.5.LCu	Po spawaniu	345 MPa	550 MPa	40 %	125 J @ 20 °C 100 J @ -196 °C
Exaton 22.12.HT	Po spawaniu	400 MPa	580 MPa	35 %	120 J @ 20 °C
Exaton 22.15.3.L	Po spawaniu	400 MPa	600 MPa	40 %	140 J @ 20 °C
Exaton 22.8.3.L	Po spawaniu	650 MPa	810 MPa	29 %	85 J @ -40 °C 65 J @ -60 °C 29 J @ -110 °C
Exaton 24.13.LHF	Po spawaniu	410 MPa	600 MPa	40 %	140 J @ 20 °C
Exaton 24.13.LNb	Po spawaniu	400 MPa	600 MPa	35 %	90 J @ 20 °C
Exaton 25.10.4.L	Po spawaniu DC+	680 MPa	870 MPa	24 %	70 J @ 20 °C 45 J @ -50 °C 42 J @ -60 °C

Exaton 15W

Typowe waciwoci mechaniczne					
Drut	**Warunki**	**Granica plastycznoci**	**Wytrzymao na rozciganie**	**Wyduenie wzgldne**	**Udarno KV**
Exaton 25.22.2.LMn	Po spawaniu DC+	335 MPa	575 MPa	42 %	120 J @ 20 °C
Exaton Ni56	Po spawaniu HI 1.6-1.8 kJ/mm DC+	450 MPa	700 MPa	45 %	100 J @ -60 °C 80 J @ -196 °C
Exaton Ni60 SAW	Po spawaniu	445 MPa	715 MPa	45 %	93 J @ -60 °C 82 J @ -196 °C