

## Flux

## Classification

Flux 860	EN 760 :	S A AB 1 56 AC H5	
Flux/wire	AWS A5.17 / A5.23	EN 756 : MR	EN 756 : TR
860 / L-60	F6A2-EL12	S 35 2 AB S1	
860 / LNS 135	F6A2-EM12	S 35 2 AB S2	S 3T 0 AB S2
860 / L50M (LNS133U)	F7A2/F7P2-EH12K	S 42 2 AB S3Si	
860 / L-61	F7A2-EM12K	S 38 2 AB S2Si	S 3T 0 AB S2Si
860 / L-70	F7A2-EA1-A2	S 42 2 AB S2Mo	S 4T 2 AB S2Mo
860 / LNS 140A	F7A2-EA2-A2	S 42 2 AB S2Mo	S 4T 2 AB S2Mo
860 / LNS T55	F7A2/F7P4-EC1	S 50 3 AB Sz	
860 / LNS 163	F7A4-EG	S 42 4 AB S2Ni1Cu	

## General description

**Multi purpose neutral agglomerated flux**

**Good impact values in both multi-run (with L60/L61/L50M) and two-run (with LNS 140A) techniques**

**High restraint cracking resistant**

## Approvals

Wire grade	BV	ABS	LRS	DNV	GL	RMRS	RINA	CRS	TÜV
L-61	A3YTM/A3TM	3YM/2YT	3YM/3T/3YT	3M/2T	3YM/2YT	3YM/2YT	3M3YM/3T3YT	3YM/2YT	x
LNS 135					3YTM				x
LNS 140A	A3YTM		3M/3YM/3YT	3Y40TM	3YM/2YT				x
L-70	A3YTM		3M/3YM/3YT	3Y40TM	3YM/2YT				x
L-60									x
LNS 150									x
LNS 163									x

## Chemical composition (w%), typical, all weld metal

Wire grade	C	Mn	Si	P	S	Mo
L-60	0.05	1.0	0.25	<0.025	<0.020	
LNS 135	0.06	1.3	0.3	<0.025	<0.020	
L-61	0.1	1.2	0.3	<0.025	<0.020	
L50M (LNS 133U)	0.07	1.7	0.5	<0.025	<0.020	
LNS 140A	0.05	1.3	0.3	<0.025	<0.020	0.4
LNS T55	0.06	1.8	0.7	<0.020	<0.015	

## Mechanical properties, typical, all weld metal

Wire grade	condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
					0°C	-20°C
L-60	AW	360	480	30	80	50
LNS 135	AW	390	490	33	100	50
L-61	AW	430	510	32	100	60
	SR	400	505	32		115
L50M (LNS 133U)	AW	460	530	28	120	80
	SR	420	520			115
LNS 140A	AW	520	570	26		70
	SR	510	580	30		50
LNS T55	AW	520	610			70
	SR	470	560			70
LNS 163	AW	460	540	27		55

AW : As welded - SR: Stress relieved

860: rev. EN 23

## Suggestions for use

Wire	Characteristics
L-60 & LNS 135	Low yield stress steels
L-61	Yield stress < 430MPa
L50M (LNS 133U)	Yield stress steels < 460MPa and good impact toughness at -20°C
L-70	Good impact toughness in two-run applications

## Materials to be welded

STEEL / STANDARD	TYPE	Multirun										
		L61		L60	LNS135		L50M (LNS133U)		LNS 140A		LNS T55	
		AW	AW	AW	AW	SR	AW	SR	AW	SR		
<b>Ship plates</b>												
	A to D	x	x	x	x			x				
	AH(32),DH(36), DH(40)	x				x	x	x	x	x	x	
<b>General Structural steel</b>												
EN 10025 part 2	S185, S235, S275	x	x	x	x	x						
	S355	x	x	x	x	x	x	x	x	x	x	
<b>Cast steel</b>												
EN 10213-2	GP240R	x	x	x	x	x						
<b>Pipe material</b>												
EN 10208-2	L210, L240, L290	x	x	x	x	x						
	L360	x	x	x	x	x	x	x	x	x	x	
	L415					x		x	x	x	x	
	L445, L480							x	x			
API 5LX	X42, X46	x	x	x	x	x						
	X52	x	x	x	x	x	x	x	x	x	x	
	X56, X60					x		x	x	x	x	
	X65, X70							x	x			
EN 10216-1/10217-1	P235, P275	x	x	x	x	x						
	P355	x	x	x	x	x	x	x	x	x	x	
<b>Boiler &amp; pressure vessel steel</b>												
EN 10028-1	P235GH, P265GH, P295GH	x	x	x	x	x	x	x	x	x	x	
	P355GH	x	x	x								
<b>Fine grained steel</b>												
EN 10025 part 3/part 4	S275	x	x	x	x	x						
	S355	x	x	x	x	x	x	x	x	x	x	
	S420					x		x	x	x	x	
	S460							x				
<b>High yield strength steel</b>												
EN 10025 part 6	S460, S500							x				

## Flux characteristics

Current type	DC / AC
Basicity (Boniszewski)	1,1
Solidification speed	High
Density (kg/dm <sup>3</sup> )	1,4
Grain size	1-16

## Packaging and available sizes

Unit	Net weight (kg)
Bag	25
Sahara ReadyBag™ (SRB)	25
Big Bag	1000

**Liability:** All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance **Fumes:** Consult information on Welding Safety Sheet, available upon request