

Product description

Neutral, calcium silicate, fused flux.

Basicity Index (according to Boniszewski) is ~1.3.
Nominal composition of the flux is:

30%(SiO₂) + 35%(CaO+MgO) + 20%(CaF₂) + 5%(Al₂O₃)

Specifications

BS EN 760 SF CS 2 DC
DIN 32522 F CS 6 63346 DC9

ASME IX Qualification

QW432 F-No -, QW442 A-No -.

Materials to be welded

The L2N flux is specifically designed for welding austenitic stainless steels (eg. data sheets B-30, B-32, B-50) but is also suitable for CrMo creep resisting steels (eg. data sheets A-12, A-13, A-17). In some instances the L2N flux is also suitable for surfacing with nickel base alloys (eg. data sheet D-20).

Applications

L2N flux is suitable for joining and surfacing. L2N shows a silicon pick-up of ~0.3% and manganese loss of ~0.35% with a 1%Mn wire (in accordance with BS EN 760).

Welding guidelines

The appropriate preheat or interpass temperature controls will be dependent on the material being welded,

guidelines can be found on the data sheet for the appropriate wire. PWHT recommendations, if required, will also be found on the appropriate wire data sheet.

Typical parameters

Current: DC or AC; DC+ operation is preferred.
Suitable for single or multi-wire, with a current carrying capacity of 900A.

Typical parameters for a 2.4mm wire are:
270-430A, 27-28V, 350-500mm/min travel speed.
For some alloys and applications smaller wires and lower currents may be preferable to minimise the risk of hot cracking.

Packaging data

Metrode L2N flux is supplied in sealed moisture resistant 20kg metal drums.

Storage

Preferred storage conditions for open drums: <60%RH, >18°C. Because L2N is a fused flux it is resistant to moisture absorption and has inherently low hydrogen potential.

If flux has become damp or has been stored for a long period, it should be redried in the range 150-250°C for 1-2 hours.

Fume data

SAW fume is negligible.

Typical weld deposit analysis, wt%

Wire	C	Mn	Si	S	P	Cr	Ni	Mo	Nb	V	N	Fe
9CrMoV-N	0.09	0.5	0.6	0.01	0.01	8.3	0.6	1	0.04	0.16	0.05	Bal
316S92	0.03	1.1	0.8	0.01	0.01	18	12	2.5	--	--	--	Bal
ER329N	0.02	1.3	0.8	0.01	0.01	23	8	3.1	--	--	0.17	Bal
62-50 *	0.02	0.1	0.8	0.01	0.01	21	64	8.8	2.5	--	--	2

* Based on analysis of two layer overlay.

Typical Mechanical properties

Wire	Tensile strength, MPa	0.2% proof stress, MPa	Elongation on 4d, %	Impact energy, J
9CrMoV-N (760°C/2h)	750	630	25	35J at +20°C
316S92	570	420	40	80J at +20°C
ER329N	840	640	30	50J at -50°C