



Shield-Bright – stainless steel cored wires for austenitic stainless steel

VERSATILE, PRODUCTIVE AND EASY TO WELD.



Shield-Bright for the most productive all-positional welding....



Deposition rate from Shield-Bright cored wires in positional welding outperforms MMA electrodes and solid wires, shown here for one minute welding in the PF (3F) position.

The Shield-Bright series of stainless cored wires are rutile types with an excellent weldability on conventional non-pulsing power sources under Ar/CO₂ mixed gas but also CO₂ shielding gas. Always operating in the smooth spray arc mode they are “welder-friendly” wires with a very low spatter level. The slag is self-lifting or easily detached, leaving behind clean flat weld surface with a good penetration and very smooth wetting onto the plate edges.

There are two series of wires. The all-positional Shield-Bright wires have a fast freezing slag to support the weld metal. This enables deposition rates in positional welding that cannot be equaled by stick electrodes or solid wires. Typical positional welding defects, such as lack of fusion and slag inclusions are avoided due to the spray arc operation.

The Shield-Bright X-tra range is optimised for downhand and horizontal vertical fillet welding, having a slow freezing fluid slag to allow high travel speeds.

A great advantage lies in the ease of use of the Shield-Bright and Shield-Bright X-tra wires which are welded using simple non-pulsing power sources and parameter settings. They can be welded in standard Ar/15-25%CO₂ mixed gas and also provide low-carbon weld metal in CO₂.

The superb “rutile” weld appearance is another favourable aspect. Welds are flat to concave with an excellent wetting and have a positive penetration. This is particularly beneficial in areas with high cosmetic or corrosion requirements such as the food processing

and paper & pulp industries. Light brushing is normally sufficient to obtain a clean weld. Unlike solid wires no silica islands are produced, therefore time is saved on cleaning the welds. Welds have an excellent X-ray quality. One-sided root runs in open joints can be welded on ceramic weld metal supports at high speeds.

- Downhand and all-positional wires
- Productive
- Welder-friendly
- Superb weld appearance
- No pulse equipment needed
- Ar/CO₂ mixed gas and CO₂
- Vacuum packed



and Shield-Bright X-tra for the best downhand and horizontal vertical fillet welding

Classifications	EN 12073	SFA A5.22
Shield-Bright 308L	T 19 9 L P M 2	E308LT1-1 / E308LT1-4
Shield-Bright 316L	T 19 12 3 L P M 2	E316LT1-1 / E316LT1-4
Shield-Bright 309L	T 23 12 L P C 2 / T 23 12 L P M 2	E309LT1-1 / E309LT1-4
Shield-Bright 308L X-tra	T 19 9 L R C 3 / T 19 9 L R M 3	E308LT0-1 / E308LT-4
Shield-Bright 316L X-tra	T 19 12 3 L R C 3 / T 19 12 3 L R M 3	E316LT0-1 / E316LT0-4
Shield-Bright 309L X-tra	T 23 12 L R C 3 / T 23 12 L R M 3	E309LT0-1 / E309LT0-4
Shield-Bright 309LMo X-tra	T 23 12 2 L R C 3 / T 23 12 2 L R M 3	E309LMoT0-1 / E309LMoT0-4

Approvals	ABS	CWB	DNV	GL	LR	KR	TÜV
Shield-Bright 308L	X	X					X
Shield-Bright 316L	X	X					X
Shield-Bright 309L		X		X			X
Shield-Bright 308L X-tra	X		X		X	X	X
Shield-Bright 316L X-tra	X		X		X	X	X
Shield-Bright 309L X-tra	X		X				X
Shield-Bright 309LMo X-tra							

Chemical composition all weld metal, typical values, Ar/15-25% CO₂ (%)

	C	Si	Mn	Cr	Ni	Mo	Cu
Shield-Bright 308L	0.03	0.9	1.2	19.0	10.0	0.1	0.15
Shield-Bright 316L	0.03	0.6	1.3	18.5	12.0	2.7	0.15
Shield-Bright 309L	0.03	0.9	1.3	24.0	12.5	0.1	0.10
Shield-Bright 308L X-tra	0.02	0.9	1.4	19.6	9.9	0.1	0.15
Shield-Bright 316L X-tra	0.03	0.6	1.3	18.5	12.0	2.7	0.15
Shield-Bright 309L X-tra	0.03	0.8	1.4	24.5	12.5	0.1	0.10
Shield-Bright 309LMo X-tra	0.03	0.8	1.2	23.5	13.5	2.5	0.10

Mechanical properties all weld metal, typical values, Ar/15-25% CO₂

	Rm (MPa)	Rp0.2 (MPa)	A5 (%)
Shield-Bright 308L	580	410	44
Shield-Bright 316L	580	450	40
Shield-Bright 309L	600	480	35
Shield-Bright 308L X-tra	580	410	40
Shield-Bright 316L X-tra	580	450	36
Shield-Bright 309L X-tra	600	480	35
Shield-Bright 309LMo X-tra	620	480	30

Deposition data, stick-out: 20mm, recovery: 85%

	ø (mm)	Welding current (A)	Arc voltage (V)	V wire (m/min.)	Dep. Rate (kg/h)
Shield-Bright types	1.2	130-220	25-30	6.0-14.0	1.9-4.6
	1.6	170-300	25-29	4.0-8.0	2.4-5.2
Shield-Bright X-tra types	1.2	150-300	25-32	8.0-18.0	2.5-7.7
	1.6	200-350	26-34	4.0-11.0	3.0-7.5

World leader in welding and cutting technology and systems



The paper and pulp and food processing industries are typical application areas for Shield-Bright stainless flux-cored wires.

ESAB operates at the forefront of welding and cutting technology. Over one hundred years of continuous improvement in products and processes enables us to meet the challenges of technological advance in every sector in which ESAB operates.

Quality and environment standards

Quality and the environment are two key areas of focus. ESAB is one of few international companies to have achieved the new ISO 14001 standard in Environmental Manage-

ment Systems across all our global manufacturing facilities.

At ESAB, quality is an ongoing process that is at the heart of all our production processes and facilities worldwide.

Multinational manufacturing, local representation and an international network of independent distributors brings the benefits of ESAB quality and unrivalled expertise in materials and processes within reach of all our customers, wherever they are located.



Global solutions for local customers - everywhere.

ESAB AB

Box 8004, SE-402 77 Göteborg, Sweden.

Phone: +46 31 50 90 00.

Fax: +46 31 50 93 90.

E-mail: info@esab.se

www.esab.com

