

FOXcore GUARD

High-alloyed, austenitic stainless, low Cr (VI) emission Flux-cored wires

All-positional flux-cored wires for welding of stainless steels type and surfacing low-alloyed steels and dissimilar welding

Product Features	Product benefits	User benefits
» Low Cr (VI) Fume emission	» Lower Cr (VI) emission in welding fume » Reduction of hazardous particles at source	» Provide highest level of protection in combination with existing safety tools » Compliance with the most stringent safety rule in term of Cr (VI) emission
» Stable arc	» Welder-friendly » Smooth wetting » Low spatter	» Low defect rate » Good fatigue resistance » Less post weld cleaning
» Excellent feedability	» Dependable feedability » Low contact tip wear	» No starting defects » Increased arc time
» Designed formulation	» Superb weld appearance » Easy slag removal	» Reduced welding costs » Productive positional welding

FOXcore GUARD line, High-alloyed, austenitic stainless multi-positional flux-cored wires are able to reduce operator exposure from airborne Cr (VI) emissions and will assist in meeting recently revised exposure limits. Less than 0.006 mg/s Cr (VI) forms with Ar + 18% CO₂ as shielding gas, which is approximately 90% lower than for conventional flux-cored wires.

The airborne Cr (VI) has been reduced without compromised weldability. Maintaining high productivity and performance, the wire can be used in all positions with good slag detachability and little spatter formation. The wide arc ensures even penetration and a good side-wall fusion to prevent lack of fusion. Suitable for service temperatures from -196°C to 400°C, depending on which welding consumables is selected from the FOXcore GUARD line.

Features include: good resistance to general, pitting and intergranular corrosion in chloride containing environments.

Please note, revised exposure limits may also require the use of auxiliary fume capture devices combined with the use of a welding respirator to be fully compliant.



Typical applications

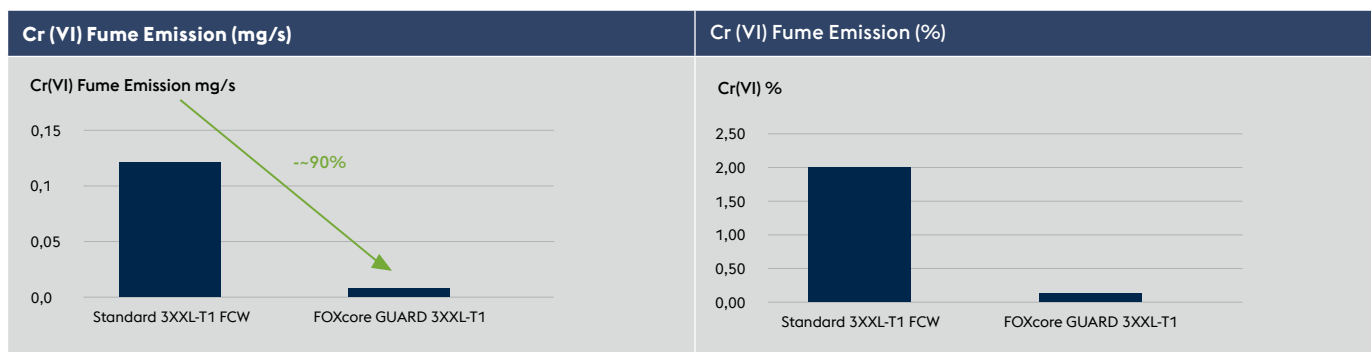
- » Petro Chemical Processing
- » Food Industry

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Classifications			Operating data	Allows welding with standard power sources.	
Product name	EN ISO 17633-A	AWS A5.22/SFA-5.22	Welding positions	Polarity	Shielding gas
FOXcore GUARD 308L-T1	T 19 9 L P M21 1	E308LT1-4		DC+	EN ISO 14715: M21 (Ar + 18% CO ₂)
FOXcore GUARD 309L-T1	T 23 12 L P M21 1	E309LT1-4			
FOXcore GUARD 316L-T1	T 19 12 3 L P M21 1	E316LT1-4			

Typical chemical composition, all weld metal, wt. %							Ferrite WRC 92
Product name	C	Si	Mn	Cr	Ni	Mo	FN
FOXcore GUARD 308L-T1	0.03	0.8	1.4	19	12.5	-	3-12
FOXcore GUARD 309L-T1	0.03	0.7	1.4	23.0	12.5	-	12-23
FOXcore GUARD 316L-T1	0.03	0.7	1.5	19.0	12.0	2.7	4-13

Mechanical properties, all weld metal (single values typical)							Hardness HB		
Product name	Condition	Yield strength R _{p0.2%} MPa	Tensile strength R _m MPa	Elongation A ₅ %	CVN Impact toughness ISO-V KV J				
					20 °C	-60 °C	-120 °C	-196 °C	
FOXcore GUARD 308L-T1	as welded	370 (≥ 320)	545 (≥ 520)	40 (≥ 30)	75			45 (≥ 32)	220
FOXcore GUARD 309L-T1	as welded	400 (≥ 320)	540 (≥ 520)	38 (≥ 30)	70	60 (≥ 32)			215
FOXcore GUARD 316L-T1	as welded	415 (≥ 320)	560 (≥ 520)	35 (≥ 30)	65		44 (≥ 32)		220



Overview spool types	Approvals
Wire basket spool BS300 <p>Precision layer wound</p> <p>Dimensions: Ø external 300 mm Ø internal 52 mm Width 100 mm</p> <p>Available spool weight: 15 kg</p> <p>Available diameters: 1.2 mm</p>	CE

Welding Machines

For the best welding performance with our diamondspark flux-cored wires, we recommend our BÖHLER Arc synergic programs on voestalpine Böhler welding machines: URANOS NX PME; URANOS NX GSM; TERRA NX PME