

# UTP A 643

Unalloyed and low alloyed steels

**Classifications** solid wire

EN ISO 16834-A AWS A5.28

G 69 6 M21 Mn4Ni1.5CrMo ER100S-G [ER100S-1(mod.)]

## Characteristics and field of use

Medium alloy solid wire electrode for shielded arc welding of quenched and tempered and thermomechanically treated fine grained structural steels; for joint welding of wear resistant steels. For use with CO<sub>2</sub> and gas mixture. Outstanding toughness of the weld metal at low temperatures. For use in crane and vehicle manufacturing.

## Base materials

S690QL1 (alform 700 M; aldur 700 QL1; Dillimax 690; N-A-XTRA 70; Weldox 700),  
S620QL1 (Dillimax 620; N-A-XTRA 63),  
S700MC (alform 700 M; Domex 700 MC; PAS 70)

## Typical analysis in %

C	Si	Mn	Cr	Mo	Ni
0.08	0.6	1.7	0.2	0.5	1.5

## Mechanical properties of the weld metal

Heat-treatment	Shielding gas	0.2%-Yield strength	Tensile strength	Elongation (L <sub>0</sub> =5d <sub>0</sub> )	Impact values CVN		
		MPa	MPa	%	J	- 40 °C	- 60 °C
U	CO <sub>2</sub>	680	740	18	80	47	
U	M 21	720	780	16	100		47

## Approvals

TÜV (No. 02760), DB (No. 42.132.08), ABS, BV, DNV GL, LR

## Form of delivery and recommended welding parameters

Wire diameter [mm]	Current type	Shielding gas (EN ISO 14175)	
0.8	DC (+)	M 21	C 1
1.0	DC (+)	M 21	C 1
1.2	DC (+)	M 21	C 1

Other spool types on request.