



Solid wire for the GMAW of Al-Mg-Si alloys with maximum 2% alloying elements and for Aluminium alloys containing up to 7% Si. Low sensitivity to weld cracking with 6000 series base alloys. Lower melting point and more fluidity (thanks to Silicon content) and better weld appearance than 5000 series filler alloys. The weld metal is not suitable for anodizing for decorative purposes. Applications in general constructions and in the automotive industry. To be used with Ar, He, pure and mixed shielding gases.

Standards: **EN ISO 18273:16** **AWS A5.10:21**
Classification: **S Al 4043 (AISi5)** **ER 4043**

CHEMICAL COMPOSITION OF THE WIRE (wt.-%)

elements	Sidergas Aluminium		EN ISO		AWS	
	min.	max.	min.	max.	min.	max.
Si	4,50	5,50	4,50	6,00	4,50	6,00
Fe	-	0,20	-	0,80	-	0,60
Cu	-	0,05	-	0,30	-	0,30
Mn	-	0,03	-	0,05	-	0,15
Mg	-	0,05	-	0,05	-	0,20
Cr	-	-	-	-	-	-
Zn	-	0,05	-	0,10	-	0,10
Ti	-	0,05	-	0,20	-	0,15
Be	-	0,0003	-	0,0003	-	0,0003
other each	-	0,05	-	0,05	-	0,05
other total	-	0,15	-	0,15	-	0,15
Al	rem.		rem.		rem.	

MECHANICAL PROPERTIES OF ALL-WELD METAL

	Sidergas Aluminium	EN ISO	AWS
	typical values (*)	minimum values	minimum values
Tensile strength (Rm) min	120 [MPa]	mechanical properties of the weld metal are not part of the classification	mechanical properties of the weld metal are not part of the classification
Yield strength (Rp0,2) min	60 [MPa]		
Elongation (A%)	15 (L₀=5d₀)		

(*) Typical values are referred to EN ISO 14175 I1 (100% Ar); base material 6061 T651; welding position PA; preheating T -; Interpass T 85°C; as-welded condition. Tensile test acc. to EN ISO 4136; Charpy impact test acc. to EN ISO 9016. Text results should not be assumed to be expected results in a particular application or weldment.

PHYSICAL PROPERTIES

	Sidergas Aluminium
	typical values
Melting range (solidus-liquidus)	573 - 632 [°C]
Density	2.680 [kg/m³]

PRODUCT APPROVALS

	Vd-TÜV	DB	CWB	CE
SHIELDING GASES (EN ISO 14175):	I1-I3	I1-I3	-	according to EN 13479:17 and Regulation (UE) No. 305/2011
GRADING:	21/22.1-22.2/23.1-23.2/24.1-24.2 (ISO 15608)	EN AW-6005A(EN 573) AlSi alloys up to 7% of Si	AWS A5.10:21	
DIAMETERS:	1.00-1.60 mm.	>1.00		
WELDING POSITIONS (EN ISO 6947):	PA,PB,PC,PF	PA,PB,PC,PF		

OPERATING DATA

welding positions (*):  PA, PB, PC, PD, PE, PF type of current and polarity:  D.C. +

(*) according to EN ISO 6947:20

Thicker plate materials require preheating to 150°C. Thorough cleaning of the workpiece bevels is necessary

BASE MATERIALS

The alloy is suitable for sustained elevated temperature applications (> 65 °C). The alloy is designed for welding heat treatable base alloys.

EN 573-3:19: AISi5A (4043A); AlMg1SiCu (6061); AlSiMg(A) (6005A); AlZn4,5Mg1 (7020); AlMgSi (6060); AlMgSi0,5; AlMgSi0,7; AlMgSi0,8; AISi1MgMn (6082).

TECHNICAL DELIVERY CONDITIONS

The technical delivery conditions (type of product, dimensions, tolerance and marking) are in accordance with EN 544:18 and EN ISO 14344:10

PACKAGING AND AVAILABLE SIZES

mm.	D-100 (0.45 kg)	D-200 (2.0 kg)	D-300 (7.0 kg)	KS-300 (7.0 kg)	K-415 (10 kg)	D-355 (18 kg)	KS-400 (40 kg)	MINIPAC60 (60 kg)	DRUM280 (80 kg)	SUPERPAC550 (173 kg)	MASTERPAC 1200 (400 kg)
0.80	X	X	X (6.0 kg.)	X (6.0 kg.)	-	-	-	-	-	-	-
1.00	X	X	X	X	-	-	-	X	X	X	X
1.20	X	X	X	X	-	X	X	X	X	X	X
1.60	-	X	X	X	X	X	X	X	X	X	X
2.00	-	-	X	X	X	X	X	X	-	X	X
2.40	-	-	X	X	X	X	X	X	-	X	X
3.17	-	-	X	-	X	X	X	-	-	-	X

Other sizes and packaging available upon request