

## Classifications

<b>EN ISO 14343-A</b>	<b>EN 14700</b>
G Z17 Mo	S Fe 7

## Characteristics and typical fields of application

GMAW solid wire of type 17% Cr 1% Mo for surfacing on sealing faces of gas, water and steam valves and fittings made from unalloyed or low-alloy steels, for service temperatures up to 450°C. Excellent anti-friction properties. The weld deposit is still machinable. Scaling resistant up to 900°C. SKWAM-IG wire is also suited for joint welding of stainless ferritic steels containing 13-18% chromium, above all for applications where uniform colour of the base metal and weld seam is required. For thick-walled components it is recommendable to use BÖHLER A 7-IG wire for the filler passes in order to improve the ductility behaviour of the joint weld, SWAM-IG wire for the cover pass.

## Base materials

### surfacing:

all weldable backing materials, unalloyed and low-alloyed.

### joint welds:

corrosion resistant Cr-steels as well as other similar-alloyed steels with C-contents up to 0.20% (repair welding). Be careful with dilution and welding technology.

## Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo	Ni
Gew-%	0,20	0,65	0,55	17,0	1,1	0,4

## Mechanical properties of all-weld metal

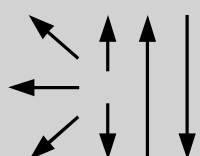
Condition	Yield strength R <sub>e</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	%	+20°C	HB
u					<b>ca 350</b>
u – 1. layer					<b>400 – 500</b>
u – 2. layer					<b>380 – 450</b>
u – 3. layer					<b>330 – 400</b>
a	≥ 500	≥ 700	≥ 15		<b>200</b>

u untreated, as-welded – base metal mild steel - shielding gas Ar + 8- 10 % CO<sub>2</sub>

a annealed, 720°C/2 h – shielding gas Ar + 8- 10 % CO<sub>2</sub>

The hardness of the deposit is greatly influenced by the degree of dilution with the base metal (depending on the relevant welding conditions) and by its chemical composition. As a general rule it can be observed that the higher the degree of dilution and the C-content of the base metal, the higher the deposit hardness. Gas mixtures containing CO<sub>2</sub> result in higher deposit hardness than CO<sub>2</sub>-free gas mixtures.

## Operating data

	<b>Polarity:</b> DC ( + )	<b>Shielding gases:</b> Argon + 8 – 10% CO <sub>2</sub>	<b>∅ (mm)</b> 1.2 1.6
		Argon + 3% O <sub>2</sub> or max. 5% O <sub>2</sub> (shielding gas depends on the application)	

Preheating to +250- 450°C for joint welding operations.

Annealing at +650- 750°C improves the toughness of the weld deposit.

## Approvals

KTA 1408.1 (08044.), DB (20.014.19), SEPROZ, CE