

soudokay

CORED WIRES

For HARDFACING, OVERLAYING, MAINTENANCE and REPAIR



1 SHORT HISTORY

Soudometal was founded in 1938 to produce welding consumables. Over the years, it evolved and expanded to eventually become Soudokay. The company has earned an enviable industry reputation for its expertise and innovation, resulting from extensive research and development. It produces cored wires for hardfacing and maintenance, and strip/flux combinations for submerged arc and electroslag strip cladding.

Based in Seneffe, Belgium, Soudokay is well-positioned to meet the challenges and expectations of increasingly-competitive and demanding markets. The network of the Böhler Welding subsidiaries, independent distributors and agents deliver Soudokay's surfacing problem solutions, worldwide.



2 SERVICE & QUALITY

Soudokay is a totally integrated company, starting from R&D and ending by the production and sales of cored wires. Soudokay has its own laboratories at its disposal, which allows them to develop specific customer oriented hardfacing solutions.



The Soudokay production installation is supported by an extensive quality insurance program ISO 9001 and KTA1408 for products applied in the nuclear industry. Since 1979, Soudokay disposes of an ASME certificate. Clearly, Soudokay stands for high quality, good service and customer support.



The world of overlaying solutions

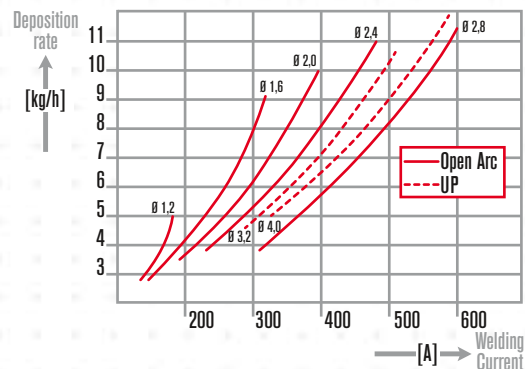
CORED WIRES for HARDFACING against ABRASION, IMPACT, WEAR, CORROSION,...

Hardfacing is the deposition of a metallic layer on the surface of a piece, in order to increase its resistance to abrasion, impact, corrosion or other wear phenomena.

Hardfacing solutions increase part lifetime, decrease production down time and maintenance costs and at the end of the day increase profit.

Welding with cored wires stands for

Wide alloy variety	The number of possible combinations of metal and powder is huge. Therefore almost every thinkable alloy can be created with a cored wire.
Efficiency	Deposition rates (kg/h) are higher than welding with electrodes or solid wire. Deposition rates between 2 and 11 kg/h can be attained.
Productivity	Number of arc hours per working day is doubled in comparison with stick electrodes.
Easy operating	Good welding behaviour remains constant in a wider range of welding parameters.



3 PRODUCTS

Soudokay delivers welding products to be used with different welding processes: **open arc, gas shielded and submerged arc welding and arc spraying**. The intended use can be deduced from the name of each wire. Wires ending by -O, -G, are intended to be welded with an open arc and a gas shielded process respectively. Wires ending by -S, -SA or -SK have been developed for submerged arc welding. Wires ending by -M or -MF are used for **arc spraying**, where the last F indicates that the deposit can be fused after spraying.

Open Arc "O"-type
Gas shielded "G"-type
Submerged arc "S"-type
Arc spraying "M" or "MF"-type

The **standard diameters** for Soudokay cored wires in mm [inch]:

Open arc wires	1.2 [0.045], 1.6 [1/16], 2.4 [3/32], 2.8 [7/64]
Gas shielded wires	1.2 [0.045], 1.6 [1/16], 2.4 [3/32], 2.8 [7/64]
Submerged arc wires	2.4 [3/32], 2.8 [7/64], 3.2 [1/8], 4.0 [5/32]
Arc spraying wires	1.6 [1/16]
Other diameters are available on request.	



↑ Part lifetime ↓ Production down time Maintenance costs ↓

↑ PROFIT INCREASE ↑

4 HOW TO SELECT THE APPROPRIATE PRODUCT FOR YOUR PROBLEM ?

Steel Works | Cement Industry | Nuclear Power | Paper Industry | Chemical Industry | Petrochemical Industry
Public Works | Off Shore | Incinerators | Mining, Sand & Gravel Industry | Brick and Clay Production and Tile Works ...

Soudokay produces wires for depositing austenitic, ferritic-martensitic, chrome carbide containing, tungsten carbide containing and complex carbides containing alloys. The diagram below will help you to find out which kind of alloy and corresponding Soudokay wire is most suitable for your application.



The world of overlaying solutions



RAILS, BUFFER LAYERS, CRUSHERS,
CYLINDERS AND HAMMERS, ...

{ SK 218-0,
SK AP-0, ... }



CARBON STEEL PARTS, ...

{ SK BU-G,
SK BU-0, ... }



CRANE WHEELS, UNDERCARRIAGE PARTS,
GRAVEL PUMPS, CONVEYOR CHAINS, ...

{ SK 600-G, SK 242-0,
SK CrMo15-Sa, ... }



SCRAPERS, CONCRETE MIXER BLADES,
CRUSHER ROLLS, WOOD CHIPPER SPOUT, ...

{ SK 900Ni-G,
SK 900-0, ... }



CONTINUOUS
CASTING ROLLS, ...

{ SK 420-0/SA, SK 724-SK,
SK 415-SA, ... }



DRAGLINE BUCKETS,
HAMMERS, CEMENT ROLLS, ...

{ SK 258TiC-0, SK D15-G,
SK 228-G, ... }



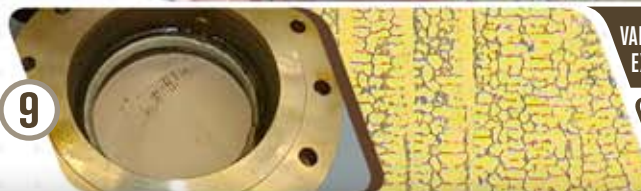
CYRATORY CRUSHERS, CHUTES AND LINERS, PULVE-
RIZER TABLES, WEAR PLATES, BUCKET TEETH, ...

{ SK 255-0, SK A43-0,
SK A70-G, ... }



HAMERS, HOT EXTRUSION DIES,
EXTRUSION PUNCHES, ...

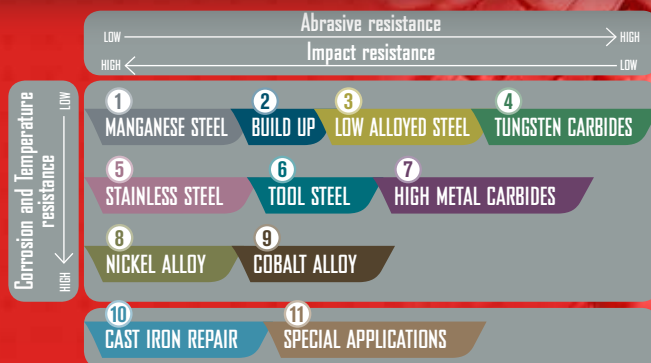
{ SK Tool Alloy C-G, ... }



VALVES AND VALVE SEATS,
EXTRUSION SCREWS, ...

{ SK Stelkay 6-G, ... }

5 SELECTION OF MOST APPLIED PRODUCTS



*	HARDNESS**		WEAR INDEX**		COMPOSITION (All Weld Metal)														
	HB	HRc	SiO ₂	Al ₂ O ₃	C	Mn	Si	Cr	Ni	Mo	Nb	Ti	W	V	B	Fe	Co	other	
	200				0,9	14	0,6	3,5	0,4							bal.			
	205				0,37	16	0,4	12,8								bal.			
	250				0,06	0,8	0,1									bal.			
		37			0,12	1,9	0,6	0,85		0,4		0,9				bal.			
	170				0,05	0,8	0,5					2,9				bal.			
	300				0,17	1,2	0,6	1,2								bal.			
	285				0,1	1	0,6	0,5		0,4		0,9				bal.			
	170				0,04	1,2	0,9	23,5	12,2							bal.			
	250				0,05	0,9	0,1									bal.			
	220				0,1	1	0,6	0,45		0,3		0,7				bal.			
	285				0,1	1	0,6	0,5		0,4						bal.			
	225				0,13	1,2	0,7	0,7								bal.			
		40			0,11	0,7	0,7	2,4				0,9				bal.			
		58	2		1,8	0,9	0,2	6,1		1,4		5,5				bal.			
	330				0,22	1,4	0,4	1,5		0,5						bal.			
		59			0,52	1,5	1,2	5,9		0,9						bal.			
		58			0,45	0,9	0,6	5,5		1,4			1,6	0,5		bal.			
	230				0,03	0,8	0,6	1,2		0,5						bal.			
		46			1,7	0,2	0,1	0,3	bal.				41,5		0,8	1,1			
		63			NiCrBSiW				bal.										
		63			2,9	0,5	0,4	5,8					42			bal.			
		45			0,03	0,5	0,6	15,5	5,2	0,5						bal.		N 0.1	
		54			0,3	1,3	0,4	16		0,5						bal.			
	160				0,09	6	0,9	18	7,8							bal.			
		39			0,04	1	0,3	12	5	0,9						bal.			
		42			0,09	0,9	0,5	13,5	2,1	1,1	0,2			0,3		bal.			
		54			0,4	0,7	0,2	13,5		0,3						bal.			
		53			0,27	1,4	0,4	13,5								bal.			
	280				0,05	0,9	0,7	17	5,6	1,3						bal.			
	260				0,04	0,9	0,3	16,5				0,04				bal.			
		54			0,26	0,9	0,5	12,2	0,4	1,4			0,9	1		bal.	1,8		
		44			0,03	0,6	0,6	12,6	5,2	0,8						bal.			
		44			0,05	1,2	0,4	13,5	3,3	1,3	0,1			0,2		bal.		N 0.1	

* The list of products is not a limiting list. Please do not hesitate to contact us for other available products.

** Measured on the third layer.

The world of overlaying solutions

The range of Soudokay products is much wider.

Complete catalogue is available on request:

doc•FAW•SMAW•S•03/08•EN

e-mail: soudokay@soudokay.be

		HARDNESS**		WEAR INDEX**		COMPOSITION (All Weld Metal)													
		HB	HRC	SiO ₂	Al ₂ O ₃	C	Mn	Si	Cr	Ni	Mo	Nb	Ti	W	V	B	Fe	Co	other
6	SK 228-G	315				0,07	0,2	0,4	9,5	1,7	2,5		0,15				bal.		
	SK D12-G		55			0,35	1,2	0,4	7,5	1,9	1,7		0,3				bal.		
	SK D15-G		60			0,4	0,6	0,4	1,4		0,5			9	0,5		bal.	3	
	SK D35-G		50			0,16	0,2	0,8	13		2,4						bal.	14	
	SK D35-S		47			0,12	0,2	0,5	15		2,4	2,3					bal.	13,5	
	SK D55-G		35			0,03	0,5	0,2		12,5	10		0,3				bal.	15	
	SK D8-G		38			0,1	1,1	0,5	2,4					3,8	0,6		bal.		
7	SK 162-O		63	0,5	45	5,4	0,2	1,3	27								bal.		
	SK 255-O		60	0,5	42	4,2	0,7	1	26,5							0,5	bal.		
	SK 256-O		63	0,5		5,5	1,2	1,2	25,7								bal.		
	SK 460-O		60	0,5		3,7	0,4	1,1	32		0,5					0,2	bal.		
	SK 674-O		61	0,3		5,4	0,2	0,8	22,5		2,9	6,2		1,2	0,5		bal.		
	SK 820-O		59	1		4,0	0,2	0,1	20							0,6	bal.		
	SK 866-O		60			4,5	0,7	0,8	24,5							0,6	bal.		
	SK A40-O		58			4,4	0,3	1,5	20,5			5,8					bal.		
	SK A43-O		63	0,3	42	5,6	0,2	1,3	20,2			6,7					bal.		
	SK A45-O		63	0,2	35	5,3	0,2	0,7	21		6,3	6		1,9	0,8		bal.		
	SK A70-G		67		0,24	2,6	1,7	0,6	14,8			4,7				2,2	bal.		
	SK A83-OSP		62			5	0,2	2	20			6	0,1	1,2			bal.	20	
8	SK 860-MF		59			NiCrBSi				bal.									
	SK tool alloy C-G	190				0,05	0,5	0,3	15,5	bal.	15,5			4,0			7		
	SK U520-Co-G	190				0,02	0,5	0,4	19	bal.			3,5				2	18	Al 1.0
	SK U521-G	195				0,01	0,3	0,3	18,5	bal.	4,5		3,5				1,8	12,5	Al 1.0
9	SK Stelkay 12-G		48			1,15	0,9	1,8	28,8					6,5			3	bal.	
	SK Stelkay 21-G		30			0,27	1,0	1,3	28	2,4	5						3,5	bal.	
	SK stelkay 400-M					0,03		2	8		28							bal.	
	SK Stelkay 6-G		40			0,95	0,9	1,5	30					4,2			3	bal.	
10	SK FN33-O	172				0,33	3,5	0,6		35,3							bal.		
	SK FNM-G	145				0,2	12	0,4		bal.							48		
	SK FN-O	175				0,6	1,4	0,3		bal.							45		
	SK FN-S	210				0,8	0,2	0,7		54			0,3				bal.		
11	SK 260-M					2	0,5	0,3								3,7	bal.		Al 4.5
	SK 848-M					0,07	2	1,8	28,5	5,7	0,1						bal.		Al 6.5
	SK Antinit Dur 300					0,1	6	5,5	21	8,5							bal.		
	SK Hydrocav					0,17	9	1,8	21,5								bal.	12	N 0.2

* The list of products is not a limiting list. Please do not hesitate to contact us for other available products.

** Measured on the third layer.

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| Soudokay, within the Böhler Welding Group, is specialised in research, production and sales of flux cored wires for hardfacing and strip/flux products for strip cladding.

Please contact us for more information.

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The list of products present in the Soudokay catalogue is not restrictive.

