

Saarstahl Certified Reference Materials

Saarstahl AG produces 2.7 million tons of steel in their LD steelmaking plant, fulfilling highest demands regarding quality, efficiency, and environmental compatibility. The steel types range from basic grades, alloyed and non-alloy quality steels and high grade steels to cold-heading steels, free-cutting steels and gauze wire to low-carbon steel, welding wire, pre-stressing steel and stranding wire.

250 employees working in the Quality Management and Testing department ensure quality at all stages of production and tests of all products. The Saarstahl quality management system is certified according to ISO TS 16949:2009. In order to ensure independent first-class and reliable inspection values, the laboratories at Saarstahl have been accredited by the German Accreditation Body (DAkkS) according to DIN EN ISO/IEC 17025.

One of the pillars of Saarstahl's success is the consistent and uncompromising adherence to strict quality principles. The continuous inspection of product quality represents one essential part thereof. The use of state-of-the-art analysis and testing equipment plus the high standard of employees in Saarstahl laboratories create the basis for achieving test results that are consistently reliable.

HRT Labortechnik GmbH has pleasure in offering Saarstahl Certified Reference Materials and Saarstahl Monitor Samples to the market. The range comprises C/S/N chips as well as solid discs for OES analysis. Eight different samples suitable for combustion analysis have been chosen, mentioning up to 20 additional values for information purposes, as well as four monitor samples, mentioning up to 27 values. Saarstahl Certified Reference Materials and Saarstahl Monitor Samples are selected from industrial lots. The CRM show a consistent grain size and clean surface. Homogenized sample material is sieved. Each bottle contains 100 grams and is supplied with a sealed cap. All monitor samples have a height of 40 mm and a diameter of 32 or 40 mm.

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Certified values given in %.

SAG #	Alloy	C	S	N
SAG 0703	100 Cr 6	0,924	0,0041	0,007
SAG 0704	C 82 D	0,818	0,004	0,004
SAG 0705	Cr-Steel	0,184	0,002	0,058
SAG 0706	34 CrNi	0,347	0,0245	0,0098
SAG 0707	44 SMn20	0,435	0,1965	0,0064
SAG 0708	26NiCrMoV	0,257	0,0014	
SAG 0709	SKD 70	0,703	0,0064	0,003
SAG 0710		0,155	0,0209	

Each bottle contains 100 grams of chips with consistent grain size.

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SAG #	certified values (in %)			approximate values, for information only (in %)																					
	C	S	N	Si	Mn	P	Cr	Mo	Ni	Al	As	Co	Cu	Pb	Nb	Sn	Ti	V	W	Bi	Te	Zr	Ta	Fe	
SAG 0703	0,924	0,0041	0,007	0,58	1,11	0,013	1,42	0,006	0,03	<0,005	0,002	0,004	0,014	<0,005		<0,001		0,003		<0,002	<0,002				rem.
SAG 0704	0,818	0,004	0,004	0,21	0,48	0,006	0,024	0,003	0,01	<0,005	0,002	<0,003	0,01	<0,005		<0,001		<0,001		<0,002	<0,002				rem.
SAG 0705	0,184	0,002	0,058	0,36	0,59		15,24	0,16	1,56	<0,005		0,018	0,094		0,011		0,016	0,044	<0,010			<0,005	<0,005		rem.
SAG 0706	0,347	0,0245	0,0098	0,32	0,72	0,012	1,53	0,18	1,43	0,022	0,002	0,005	0,009	<0,005		<0,001		0,004		<0,002	<0,002				rem.
SAG 0707	0,435	0,1965	0,0064	0,18	0,99	0,019	0,07	0,008	0,037	<0,005	0,003	0,004	0,03	0,24		<0,001		0,001		<0,002	<0,002				rem.
SAG 0708	0,257	0,0014		0,21	0,33	0,007	1,38	0,44	3,47	0,007	0,004	0,009	0,068	<0,005		0,005		0,096		<0,002	<0,002				rem.
SAG 0709	0,703	0,0064	0,003	0,22	0,51	0,005	0,029	0,005	0,019	<0,005	0,002	0,003	0,012	<0,005		0,001		<0,001		<0,002	<0,002				rem.
SAG 0710	0,155	0,0209		0,23	0,73	0,011	1,52	0,26	1,39	0,031	0,002	0,004	0,011	<0,005		<0,001		0,004		<0,002	<0,002				trm.

Saarstahl Monitor Samples

Approximate values for information (%)

	SAG 0201	SAG 0202	SAG 0203	SAG 0204
Approximate size (mm)	D 40 x H 40	D 40 x H 40	D 32 x H 40	D 40 x H 40
Alloy	Pure Iron	1.1238.00	1.7147.01	1.1213.00
Element				
C	0,005	-	-	-
Si	0,014	0,22	0,16	0,29
Mn	0,054	0,51	1,12	0,80
P	0,003	0,007	0,008	0,016
S	0,005	-	-	-
Cr	0,015	0,020	1,00	0,18
Mo	0,002	-	0,01	0,040
Ni	0,018	0,020	0,030	0,040
Al	<0,0005	-	0,030	0,030
As	0,002	0,001	0,002	0,002
B	<0,0005	-	<0,0005	<0,0005
Co	0,003	0,003	0,004	0,003
Cu	0,008	0,010	0,020	0,020
Nb	<0,001	-	<0,001	<0,001
Pb	<0,0001	-	<0,001	<0,001
Sn	<0,002	0,001	<0,001	<0,001
Ti	<0,002	-	<0,001	<0,001
V	<0,002	-	0,003	<0,001
W	<0,002	-	<0,001	<0,001
Zr	<0,002	-	-	-
Bi	<0,002	-	-	-
Ca	<0,002	-	<0,001	<0,001
Te	<0,002	-	<0,001	<0,001
Ta	<0,002	-	<0,001	<0,001
Sb	<0,002	-	<0,001	<0,001
Zn	<0,002	-	-	-
Se	<0,002	-	-	-