

Stainless steel **SGS-X13**

The **SGS-X13 stainless steel** is used when good mechanical properties and moderate oxidation resistance are needed. Thanks to its hardness, this alloy is extremely abrasive resistant.



Designations

SEVA designation: **SGS-X13**

Standard designation:
(*martensitic stainless cast steels*)

AFNOR X 30 CR 13 -M (NF A 35-059)

EN GX 30 Cr 13 (NF EN 10283)

DIN 1.4028

AISI 420



Chemical Analysis (in%)

Standardized: (NF EN 10088)

Fe	C	Cr	Ni	Si	Mn
Bal.	0,25 - 0,35	13 - 14	0,5 maxi.	1 maxi.	1 maxi.



Mechanical properties

Hardness: 220-270 HB.

Tensile test at room temperature:

Re (MPa)	Rp0,2 (MPa)	Rm (MPa)	A%
400	600	800	17

Young's modulus: 257 GPa



Applications

Areas of use reas of use

- Food-processing industry
- Hydraulics
- Other industries

Maximum temperature of use

750°C

Types of parts produced

- Moulds for the glass industry
- Pumps and valves parts



Standard structure

Martensitic steel



Physical Properties

Density: 7,5

Thermal expansion coefficient between 20°C and :

100°C	200°C	300°C	400°C
10,5	11,0	11,5	12

Thermal conductivity at 20°C : 30 W.m⁻¹.K⁻¹



Other properties

Magnetism: Magnetic



Production

SEVA produces the **SGS-X13** alloy in an electric induction furnace.

Cast in a sand mold.

Heat treatment: **Normalization and quenching.**



Compatible processes

	Compatibility	Remarks
Machining	● ● ● ○ ○	Cutting speed: ~ 100 - 130 m/min (with carbide tools M type)
Polishing	● ● ● ● ●	
Welding	● ● ○ ○ ○	
Hot isostatic pressing (HIP)	● ● ○ ○ ○	
Forging	● ○ ○ ○ ○	

The information in this document is an average and not a guaranteed maximum or minimum value. The applications indicated for the grades described are for guidance only to assist the reader in his or her personal evaluation and are not warranties, expressed or implied, of suitability for any specific purpose. Saint-Gobain SEVA's liability shall in no case be extended to the choice of product or to the consequences of this choice.



Saint-Gobain SEVA

43 rue du Pont de Fer - BP 10176
71105 Chalon-sur-Saône cedex
France

Tél. : + 33 3 85 47 25 88
+ 33 3 85 47 28 06

at-seva@saint-gobain.com