

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



Applications

Areas 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 gates



Analyse chimique (en%)

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 module: 257 GPa



Standard structure

Martensitic steel



Physical Properties

Density: 7,5

Thermal conductivity between 20°C and :

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

Thermal expansion coefficient 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

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

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