

Typical chemical composition (%)

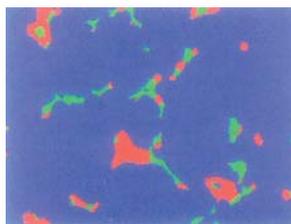
C	Cr	Mo	Si	Mn	Fe	Bi	Sn	Ni
0.05 max.	11 - 14	2 - 3.5	0.5 max.	1.5 max.	2 max.	3 - 5	3 - 5	Matrix

Normalized designation

ASTM A494 : CY5SnBi - M

Microstructure

The SGS-75 alloy is composed of a nickel, chromium and molybdenum rich austenitic matrix. The second phase is rich in tin and bismuth and confers the tribological properties of the alloy.



Elaboration

The SGS-75 alloy is cast in foundry according customer drawing, in sand moulds or ceramic shells (from single units to medium series).

Galling resistance

The galling resistance, as per ASTM G98, for SGS-75 alloy in contact with 316L (GX 5 CrNiMo 19-11-2) is 350 MPa compared to 15 Mpa for 316L in contact with itself.

Friction coefficient

The friction coefficient of the SGS-75 alloy is around 0.5 to 0.6 in contact with 316L steel (under a load of 1 MPa).

Corrosion resistance

The SGS-75 alloy is resistant to corrosion, making it an appropriate choice for use in food-processing. It is also applicable for use in the pharmaceutical industry. For further information, please contact us.

Machinability and polishing

The SGS-75 alloy is easily machinable (cutting speed of 80 m/min) and polishable.

Hardness

140 - 150 HBS.

Fields of use

All parts requiring non-lubricated contact with stainless steel, for example rotors and pistons for pumps, as well as measuring machines for the food-processing, chemical and pharmaceutical industries.

The SGS-75 alloy is nickel and chromium-based and is particularly resistant to galling with stainless steels.

This alloy is resistant to corrosion and can be used to make moving parts in contact with stainless steel, without the need for lubrication. This is particularly useful to the food-processing, chemical and pharmaceutical industries for instance.

Contact

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