

Gasite® 18G

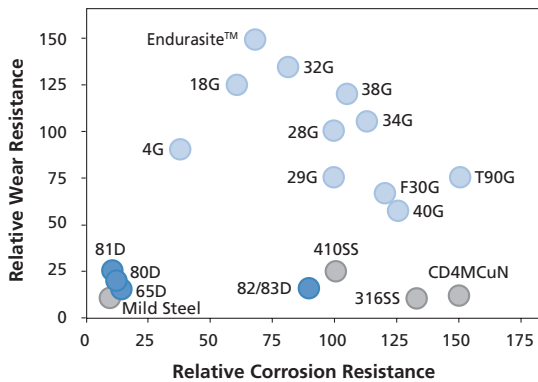
Basic Specifications

High wear resistant chromium-molybdenum white iron alloy.

Mechanical Properties

Tensile Strength: 80-120 KSI

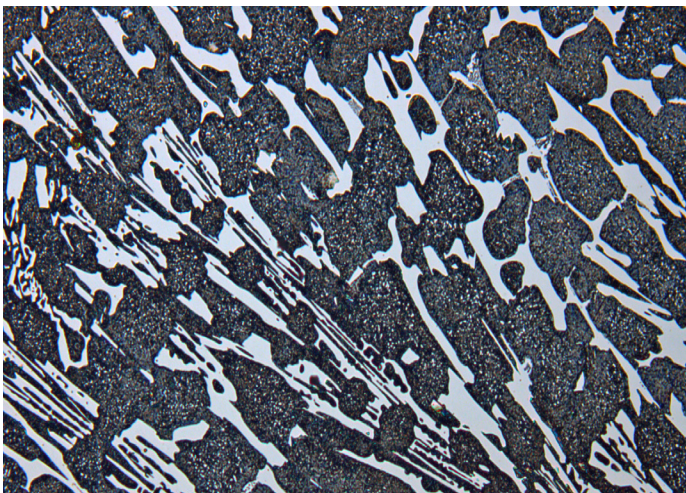
Hardness (per ASTM A532) ≥ 650 HBN/59 HRC



Wear & Corrosion Resistance Index for GIW® Minerals alloys

Microstructure

The microstructure of our Gasite® 18G alloy consists of eutectic and secondary carbides in a mostly martensitic matrix. This ideal microstructure offers excellent wear resistance as well as good mechanical strength.



Typical microstructure of 18G alloy (magnification 200X)

Wear Resistance

Gasite® 18G is one of the best materials in wear resistance among GIW® Minerals white iron alloys. It can provide wear resistance over our standard high-chromium white iron (28G) when corrosion is not a concern.

Corrosion Resistance

18G has moderate resistance against corrosive conditions. At relatively low temperatures (less than 100° F) and chloride levels (less than 500ppm), the recommended pH range is 6-11.

Chemical Specifications

Gasite® 18G is a proprietary metal (manufacturing process patent # 4,638,847). This alloy conforms in chemistry and physical properties to ASTM Standard A532, Class I, Type B/D.

Element	Gasite® 18G
Carbon	2.5%-3.3%
Chromium	16-22.0%
Molybdenum	1.0-3.0%

Test Specimens and Certifications

A chemical analysis of each heat is conducted prior to pouring. For further quality control, we routinely pour test bars from random heats. After heat treating, the tensile strength and hardness of the test bars are measured and recorded, and the casting is checked for uniform hardness at several locations.

Heat Treatment

A multi-step thermal treatment is applied to this alloy to produce a high level of wear resistance and the desired mechanical strength.

Application

With its superior wear resistance, Gasite® 18G is well suited for the manufacture of pump parts, mill liners and other wear resistant castings.



GIW Industries, Inc. (A KSB Company)
5000 Wrightsboro Road, Grovetown
Georgia 30813-2842, USA
www.giwindustries.com

GIW® Minerals