

### **MATERIAL SPECIFICATION**

Material: Centrifugally Cast Gray Iron.

Application: Cylinder liner and piston rings in general, not heat-treated.

#### **Specifications**

American - Classification ASTM - A 48, Class 30 German - DIN 1691 GG 30

## **Chemical Composition**

Element	С	Si	Mn	Р	S	Cr	Мо	Ni	Sn
%	3,0-3,6	2,0-2,7	0,5-0,9	0,2-0,65	≤ 0,10	0-0,50	≤ 0,40	≤ 0,50	≤ 0,25

Other elements may be present as impurities.

# Mechanical properties

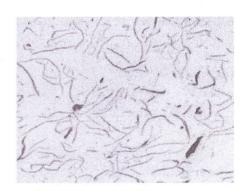
Hardness: 93 - 104 HRB, 200 - 270 HB Tensile Strength: min. 270 N/mm2

#### Microstructure

**Graphite:** fine, lamellar and uniformly distributed. Preferably type A, size between 5 and 7.

**Matrix:** perlitic, with ferrite not exceeding 5%.

Note: Variations in composition ranges are admissible on condition that the structure and mechanical properties are not affected.



100:1 Non-etched



400:1 Etched with Nital