

KALCAST NiHard1

Material data sheet

Product features

Lining material for protection against abrasive wear. KALCAST NiHard1 is a hard casting with a high nickel- and chromium content that is available in form of plates, individual shapes and cylinders.

Quality features

KALCAST NiHard1 is made with the aim of achieving high resistance against abrasive wear combined with satisfactory resistance against impact wear.

Product properties

Feature	Unit	Data	
Chemical composition	Wt.-% C	3.3	
	Wt.-% Cr	2.2	
	Wt.-% Ni	4.2	
	Wt.-% Fe and others	Balance	
Hardness	Vickers	HV ₁₀	550
Density		g/cm ³	7.8
Thermal coefficient of expansion		K ⁻¹ (20 – 350 °C)	8.1 – 12.8 x 10 ⁻⁶
Thermal conductivity		W/mK (20 – 350 °C)	13
Max. application temperature		°C	350
Max. thermal shock resistance		°C/h	70

Due to the manufacturing process, it is not possible to exclude small variations in the properties of the product. This affects tolerances in the size, outer appearance and surface finish. Included are some typical features of hard cast materials, such as cavities and pores, all of which can be present within the range of specified tolerances.

Approximate figures are given for all technical data. They are based on assessment of tests on specific samples and cannot be considered as a guarantee for which Kalenborn would have to assume legal responsibility.

Subject to technical changes and errors.

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Product description

High-alloyed, abrasion resistant cast iron with high carbon content. The material is alloyed with nickel and chromium. The various shapes and geometries are cast in individual moulds.

Installation

Standard attachment modes are used for KALCAST NiHard1. Cast KALCAST NiHard1 shapes can also be attached by synthetic resin based adhesives or by mineral glues as well as by temperature and acid resistant compounds.

Advantages

High resistance against abrasive wear combined with good resistance against impact wear. Well suited for series-produced items. Wear protection for complex geometries. Very good wear protection reserve.

Application examples

Typical applications of KALCAST NiHard1 are – e. g.

- pulverized coal pipes and bends
- concrete mixers
- crushers
- shot blasting machines
- hammers
- deflecting walls
- pump housings
- impact bars
- grinding rollers/grinding tables