

KALMETALL W143

Material data sheet

Product features

Lining and/or construction material to protect against abrasive wear. KALMETALL W143 is a compound material made of a high-carbon and high-chrome alloy of iron, which is welded onto a tough basic body. KALMETALL W143 can be supplied as plates, pre-cut shapes and ready-to-install components.

Quality features

KALMETALL W143 is made with the aim of achieving high resistance to wear and impacts.

Product properties

Feature	Unit	Data	
Chemical composition			
Base material 1.0038/S 235 JRG2/St 37			
Hard overlay welding	Wt.-% C	5	
	Wt.-% Cr	22	
	Wt.-% Nb	7	
	Wt.-% Fe + others	balance	
Hardness	Hard material	HV	740
Density		g/cm ³	7.8
Thermal coefficient of expansion		K ⁻¹ (20 – 350 °C)	12 x 10 ⁻⁶
Thermal conductivity		W/mK (20 – 350 °C)	46
Max. application temperature		°C	350
Max. thermal shock resistance		°C/h	120

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 welded metallic products, such as cavities and pores. Fractures in the hard overlay welding are implied and a quality feature.

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.

KALMETALL W143

Material data sheet

Product description

Hard overlay welded steel systems that consist of a tough basic body and the hard overlay welding.

Special components can be custom fabricated any time. Components of self-supporting structure are characterized by low weight and high economy.

KALMETALL W143 can be applied up to 350 °C depending on application and geometry.

Installation

By overlay welding or use of standard plates to fabricate complete structures.

Advantages

High wear resistance and high impact strength combined with optimal adaptation to the customer's requirements.

Application examples

KALMETALL W143 can be supplied as plates, pre-cut shapes and ready-to-install components – e.g.

- screw conveyors
- separating cones
- clinker chutes, clinker coolers
- coke benches (skirting boards)
- impact zones in bunkers
- belt transfer points
- mill linings
- crusher linings
- fan blades
- separator blades
- screens
- flights of screw conveyors
- concrete mixer linings
- chutes
- pipes (dust pipes, ash pipes, etc.)
- cyclone linings

The very high resistance to wear, the high level of hardness and the thicknesses which can be adapted for the application in question allow for a durable wear protection solution.