

## Substrate preparation and primer

The objective of the substrate preparation	The surface of the different metals must be prepared so that adhesion of the primer is ensured and application with the selected HENSOTHERM® fire protection system R 30, R 60, R 90 or R 120 can take place.		
Metal types	Preparation measures	Primers	
Steel surface, blasted	<ul style="list-style-type: none"> <li>Blasting in accordance with degree of preparation Sa 2.5</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 1966 E HENSOGRUND 2K EP HENSOGRUND WB Green	The application quantities given in the technical data sheets for the primers do not take into account the correction factors for rough surfaces in accordance with ISO 19840.
Corroded steel parts Sand blasting not possible (PSt 2 / St 2)	<ul style="list-style-type: none"> <li>Hand de-rusting of the corroded surfaces, e.g. using a wire brush or mechanical prepared</li> <li>Minimum requirement PSt 2 / St 2</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 1K AK	
Corroded steel parts Sand blasting not possible (St 3)	<ul style="list-style-type: none"> <li>Mechanical preparation, metallically bright</li> <li>Minimum requirement St 3</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 1K AK HENSOGRUND 2K EP HENSOGRUND WB Green	
Cast steel	<ul style="list-style-type: none"> <li>Remove old layers of paint and all contamination up to the bare metal through blasting</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 1K AK HENSOGRUND 2K EP	
Stainless steel	<ul style="list-style-type: none"> <li>Blasting with abrasive non-metallic blasting material</li> <li>Roughening with abrasive fleece (grain 200–300)</li> <li>Alternative glass blasting</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 2K EP HENSOGRUND WB Green	
Transport damage to primed steel surfaces or R30 coatings e.g. defects	<ul style="list-style-type: none"> <li>Hand de-rusting of the corroded surfaces, e.g. using a wire brush</li> <li>Minimum requirement PSt 2</li> <li>Clean: dust, oil and grease-free</li> </ul>	HENSOGRUND 1K AK	
Zinc corrosion (white rust), galvanised surfaces	Alternative in accordance with the degree of the contamination: <ul style="list-style-type: none"> <li>Sweep blasting (Must be used after storage outside!)</li> <li>Sanding, e.g. with a sanding pad</li> <li>Clean with solvent</li> <li>Clean with high-pressure cleaner</li> </ul>	HENSOGRUND WB Green HENSOGRUND 2K	
Pre-coated surfaces	<ul style="list-style-type: none"> <li>Suitability and compatibility test, see sheet on „Testing pre-coatings on steel constructions“</li> <li>Protocolling, see template „Protocol on the testing of pre-coatings“</li> <li>If suitable, further process as for transport damage</li> </ul>		

Information on the properties and application of the primers belonging to the HENSOTHERM® fire protection coating systems are in the respective technical data sheets. These are available to you as PDF in the download area at [www.rudolf-hensel.de](http://www.rudolf-hensel.de).

### Substrate preparation by blasting

#### Compressed air abrasive blast cleaning (DIN EN ISO 12944-4, Section 6.2.3.1.2)

“Compressed air abrasive blast cleaning involves feeding the abrasive to a flow of compressed air that is then ejected at high speed through a nozzle directed at the surface to be cleaned.

The abrasive can be fed to the air flow from a pressurised vessel or taken up by suction into the air flow from an unpressurised vessel.

See ISO 8504-2 for the application range, effectiveness, and limits of this method.”

#### Sa blasting preparation levels; cf DIN EN ISO 12944-4, Annex A:

**Sa 1** – loose (mill) scale, loose corrosion, loose coatings, and loose dissimilar contaminants have been removed.

**Sa 2** – virtually all (mill) scale, virtually all corrosion, virtually all coatings, and virtually all dissimilar contaminants have been removed. All remaining residue must adhere firmly.

**Sa 2 ½** – (Mill) scale, coatings, dissimilar contaminants have been removed. Remaining traces must be visible at the most as slight, patchy, or striate shadings.

**Sa 3** – (Mill) scale, coatings, and dissimilar contaminants have been removed. The surface must present a homogeneous, metallic appearance.

### Substrate preparation with power tools

#### DIN EN ISO 12944-4, Section 6.2.2

“Typical power tools are machines with rotating wire brushes, various kinds of abrasive attachments, rust removing hammers, and needle guns.

Surface areas that cannot be reached with these tools must be prepared by hand.

In addition, the method employed may not damage or deform the treated components, specifically in any manner characteristics of impact tools (indentations). It must be ensured when wire brushes are used that surfaces with corrosion are not only polished. ...”

#### St – power tool preparation levels; DIN EN ISO 12944-4, Annex A:

**St 2** – loose (mill) scale, loose corrosion, loose coatings, and loose dissimilar contaminants have been removed.

**St 3** – loose (mill) scale, all (mill) scale, loose corrosion, loose coatings, and loose dissimilar contaminants have been removed. The surface, however, must be treated with greater thoroughness than St 2 so that it can present a metallic lustre

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