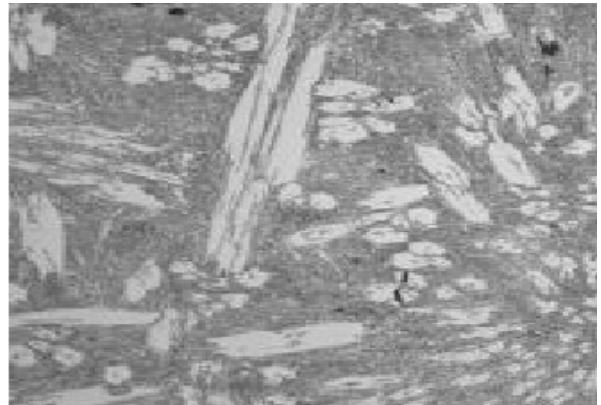


HARDFLEX® wear resistant materials

VIDAPLATE® - VIDASTRIP (with wear resistant overlay) Grade: V31



material data

| | |
|---------------------------------------|-----------------------------|
| Grade | V 31 |
| service life multiple of carbon steel | approx. 28 |
| initial hardness | 63 HRc |
| max. service temp. | 650 °C |
| basematerial | highstrength steel |
| tensile strength at 20°C | 420 – 500 N/mm ² |
| yield strength at 20°C | 280 – 400 N/mm ² |

sizes

| Grade | | V 31 | | | | |
|--------------------------|----|----------------|-----------|-----------|-----------|-----------|
| thickness (total) | mm | 27 | 19 | 14 | 12 | 10 |
| thickness (cladding) | mm | 17 | 9 | 6 | 6 | 4 |
| strip width* (standard) | mm | 50, 75 and 100 | | | | |
| strip length* (standard) | mm | 500 - 3048 | | | | |

* special width and lengths are on request

general description

Extreme strong carbides, uniformly distributed in a tough, austenitic steel matrix, result in a material with a service life multiple of approx. 28 times higher than mild steel. The carbide overlay is fused to a highstrength steel backing plate.

The overlay is free of nickel.

stress relief cracks

The relief cracks clearly visible across the strip are simply shrinkage cracks and do not reduce the performance of the hardfacing. They are in the hardfacing overlay only and do not progress into the base metal.

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cutting

Plasma cutting is the recommended method. It is preferable to cut from the base steel side as it gives a clean edge on the backing plate.

forming

overlay inside:

min. radius 75 mm for 6mm overlay on 8 mm backing plate.
min. radius 150 mm for 9 mm overlay on 10 mm backing plate.

relief cracks should be across to the line of curvature.

overlay outside:

min. radius 500 mm.

relief cracks should be parallel to the line of curvature.

Enlarged relief cracks after the forming are filled with our HF-tubular hardfacing electrodes.

welding

The highstrength steel base plate can be welded with standard mild steel rods. **HF**-tubular hardfacing electrodes have to be used to overlay mild steel welds in abrasion areas.

drilling

Holes are made by plasmacutting and by welding of bushes. Normal drilling is not possible.

fastening methods

permanent joint:

Fillet weld or Plug weld for permanent installations for static and dynamic use.

detachable connection:

screwing by:
pre-machined mild steel insert with the desired cladded HF-bolts size dimensions is welded into plasma cut hole on the backing side.

In addition welded thread inserts or thread studs (nelson) can be used.

surface finish

Very smooth surface (to prevent product "hang-up").

Grinded surface can be delivered as special type (i.e. for slides).

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The data shown above is based on long lasting experience in the manufacturing and use of wear resistant materials. As there are many unknown possible parameters and conditions in practice, which may limit standard performance, it is requested that the user runs practical tests. Except as expressly stated, **HARDFLEX**'s liability, expressed or implied, is limited to the published selling price of our defective item.

HARDFLEX GmbH - Höffgeshofweg 2 - 47807 Krefeld, Germany - www.hardflex.com
Tel.: ++49-(0)2151-835870 - Fax: ++49-(0)2151-835877 - e-mail: info@hardflex.com

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