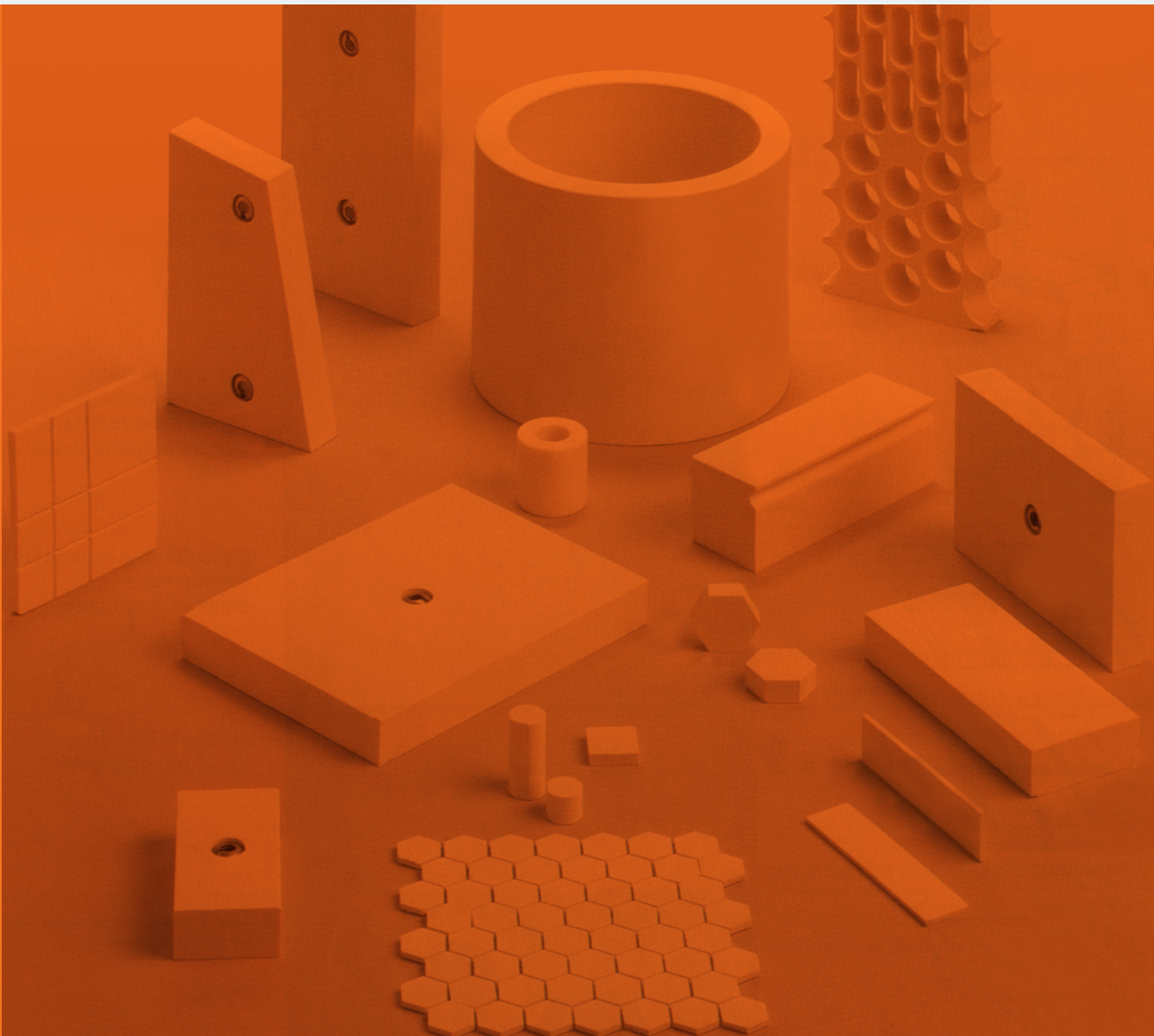
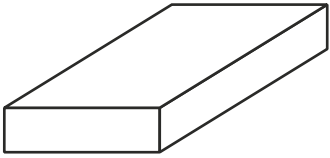

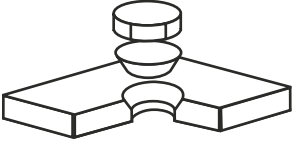

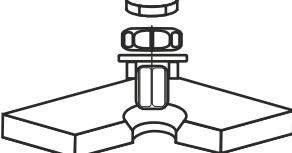
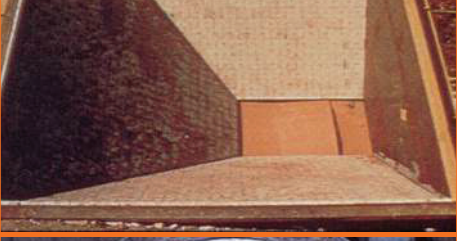
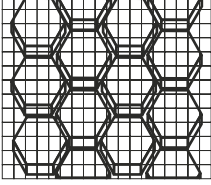

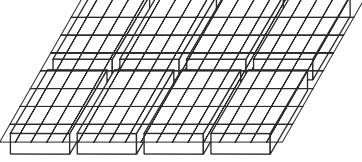

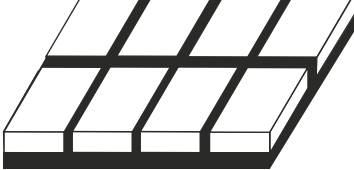
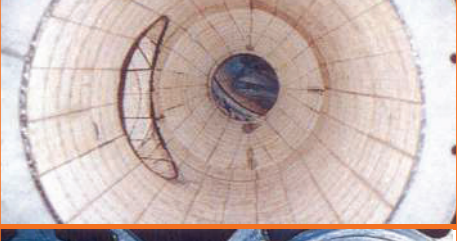
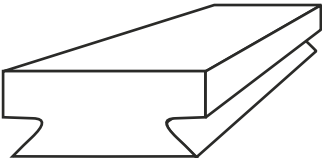
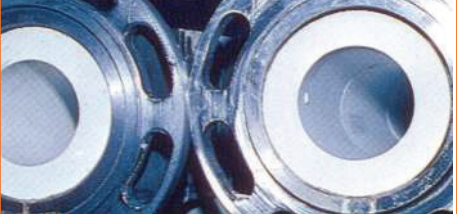


***hardcarb***<sup>®</sup>

**Wear resistant  
High Alumina Ceramics**



## AVAILABLE SHAPES | TYPICAL APPLICATIONS

Available shapes	Typical applications	Advantages
 <p data-bbox="316 656 432 685">Full brick</p>		<ul style="list-style-type: none"> <li>» Facilitates sliding</li> <li>» No caking of material</li> <li>» Low maintenance</li> </ul>
 <p data-bbox="288 898 459 927">Weldable brick</p>		<ul style="list-style-type: none"> <li>» Double wear protection due to double thickness at the same weight as steel or casting</li> </ul>
 <p data-bbox="300 1137 451 1167">Bolt-on brick</p>		<ul style="list-style-type: none"> <li>» Product safety</li> <li>» Low maintenance costs</li> <li>» High efficiency</li> </ul>
 <p data-bbox="244 1391 507 1420">Hexagonal tiles on mat</p>		<ul style="list-style-type: none"> <li>» Minimal weight</li> <li>» Noise reduction</li> <li>» Highly wear resistant</li> <li>» Can be adapted to suit the media</li> </ul>
 <p data-bbox="236 1626 512 1655">Rectangular tiles on mat</p>		<ul style="list-style-type: none"> <li>» Considerably increased service life</li> <li>» Minimal down times</li> </ul>
 <p data-bbox="172 1868 571 1897">Rectangular tiles with rubber lining</p>		<ul style="list-style-type: none"> <li>» Simple to install</li> <li>» For all pipe diameters</li> </ul>
 <p data-bbox="288 2119 456 2148">Moulded parts</p>		<ul style="list-style-type: none"> <li>» Any form can be supplied to requirement</li> </ul>

## METHODS OF FIXING | INSTALLATION SERVICES



### ADHESIVE

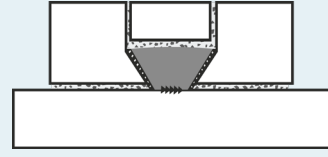
Materials used are epoxy resin, cements, heat resistant putty.

#### Applications:

Suitable for temperatures up to 150°C for use on even surfaces and slightly inclined walls. Where there are strong thrusting forces, thrust bars must be welded in at intervals.

#### Advantages:

Low cost, simple to install



### WELDING

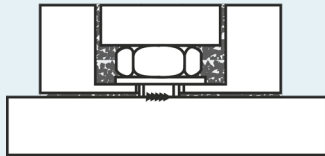
Materials used for lining (depending on temp.): silicone rubber, epoxy resin, cements

#### Applications:

suitable for temperatures up to 1400°C, for use on vertical walls, sharply inclined walls.

#### Advantages:

Quick to install, temperature resistant.



### BOLTING

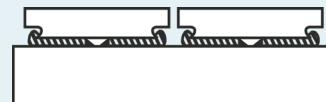
Materials used for lining (depending on temp.): silicone rubber, epoxy resin, cements

#### Applications:

For overhead installations and on vertical walls

#### Advantages:

Low cost, simple to install



### CLAMPING

#### Applications:

For surfaces exposed to high temperatures and where extremely abrasive media is being transported.

#### Advantages:

Temperature resistant surface, easy to replace, existing clamping device can be re-used, smooth surface as no plugs needed.

### INSTALLATION SERVICE

For installation of hard ceramic parts, we offer three possibilities:

- » Installation at client site by our specialists.
- » Installation at our works if the units can be transported.
- » Installation by client themselves following instructions from our specialists.

## Standard dimensions of rectangular hard ceramic tiles

Dimension Length x Width (mm)	Typical thickness of hard ceramic tile (mm)			Quantity required for 1 sq.m (nos.)
20 x 20	3			2500
50 x 50	6	10	13	400
100 x 100	10	15	20	100
100 x 150	10	15	20	66
150 x 200	10	15	20	33

Other sizes available on request.

### Specifications and technical data

Highly wear resistant hard ceramics are aluminium oxide sintered parts ( $Al_2O_3$ ) which are manufactured by a special process. The outstanding features of these ceramics are extraordinary high abrasion resistance and high temperature resistance.

Features	Hardcarb - K85 (85% $Al_2O_3$ )	Hardcarb - K92 (92% $Al_2O_3$ )
Specific gravity g/cm <sup>3</sup>	3.39	3.6
Hardness HRC	73	79
Water absorption	-	-
Colour	White	White
Temp. resistance in oC max	1400	1500
Flexural strength at 25 oC in N/mm <sup>2</sup>	296	338
Ductile strength at 25 oC in N/mm <sup>2</sup>	155	221
Compressive strength at 25 oC in N/mm <sup>2</sup>	1930	2482

#### Contact Us

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