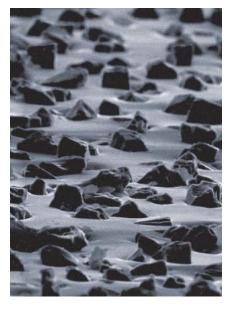


Shims with friction-enhancing coating based on electroless nickel with embedded hard particles.



Surface structure of EKagrip® friction shim

# Product data

- Greatly increased coefficient of static friction
- Function of EKagrip® friction shims is not affected by an oil film
- Can be easily retrofitted
- Prevents fretting
- Highly reproducible
- Good corrosion resistance
- Color option for distinctive appearance
- Shim geometries according to customer specification



EKagrip® friction shim geometries according to customer specification

# Application

- Frictional joints
- Flange joints
- Joints with central bolt
- Bolt connections
- Fastener systems
- Shaft-to-collar connections

### Additional information

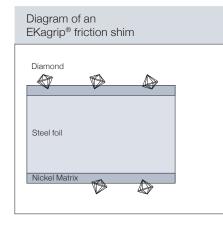
Relevant patents: EP 0961038 B1 US 6347905 B1 JP 3547645 B2

### Storage

Dry storage recommended.







Variables influencing the coefficient of static friction	
Counter Part	<ul><li>Surface roughness</li><li>Surface topography</li><li>Material properties</li></ul>

	<ul><li>Surface topography</li><li>Material properties</li></ul>
Coating	<ul><li>Diamond grain size</li><li>Diamond concentration</li><li>Foil/direct coating</li></ul>
Load	<ul><li>Type of load</li><li>Static/dynamic</li></ul>
Environment	<ul><li>Dry/lubricated</li><li>Additional adhesive</li></ul>
Assembly	<ul> <li>Surface pressure</li> <li>Reassembly after slippage</li> </ul>

#### Processing

When EKagrip<sup>®</sup> friction shims are used please note:

- Contamination may impair the correct function of the shim.
- Folding the shim will damage it.
- For maximum performance the mating surfaces must have roughness values Rz as given in the technical data sheet.
- Contact pressure of at least 50 MPa is recommended.
- When designing the joint ensure that the counterparts to be joined are in full contact.
- The coefficient of static friction depends on a large number of different parameters. It is therefore always advisable to carry out application tests with assistance from ESK.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. The management system has been certified according to ISO TS 16949, DIN EN ISO 14001. EKagrip® is a registered trademark of ESK Ceramics GmbH Co. KG

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