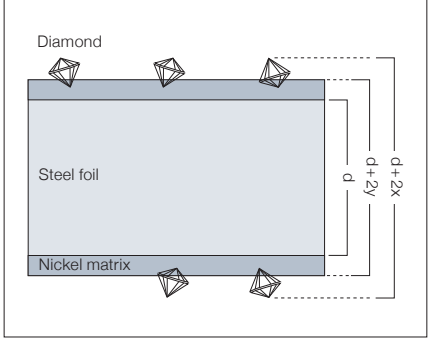
EKagrip®
TECHNICAL DATA

Functional Properties	Friciton-enhancing EKagrip® electroless nickel composites coating		
Material properties*	EKagrip® 10	EKagrip® 20 PLUS	EKagrip® 25 PLUS
Form as supplied	Shim with EKagrip® 10 coating	Shim with EKagrip® 20 PLUS coating	Shim with EKagrip® 25 PLUS coating
Hard particle	Diamond	Diamond	Diamond
Mean particle size	10 µm	20 µm	25 µm
avg. concentration of diamonds on the surface	8 – 16 %	8 – 20 %	8 – 25 %
Matrix material	Electroless nickel phosphorus	Electroless nickel phosphorus	Electroless nickel phosphorus
Thickness of matrix y	5 – 9 µm	10 – 14 µm	10 - 20 µm
Total layer thickness x	10 – 20 µm	20 – 35 µm	25 - 35 µm
Heat treatment	150 °C ± 10 °C / 350 °C ± 10 °C	150 °C ± 10 °C / 350 °C ± 10 °C	150 °C ± 10 °C / 350 °C ± 10 °C
Hardness of nickel-phosphorus matrix	approx. 600 HV / 900 HV	approx. 600 HV / 900 HV	approx. 600 HV / 900 HV
Color	metallic or charcoal	metallic or charcoal	metallic or charcoal
Shim material (preferably)	C 75 S (acc. to EN 10132-4)	C 75 S (acc. to EN 10132-4)	C 75 S (acc. to EN 10132-4)
Thickness of shim d	Standard 0.1 mm ± 0.01 mm (others upon request)	Standard 0.1 mm ± 0.01 mm (others upon request)	Standard 0.1 mm ± 0.01 mm (others upon request)
Total thickness after coating (with shim 0.1 mm ± 0.01 mm)	0.13 mm ± 0.02 mm	0.15 mm ± 0.02 mm	0.16 mm ± 0.02 mm
Base part production by	Laser cutting or stamping	Laser cutting or stamping	Laser cutting or stamping
Mean roughness R_z of counterpart surface (transversal to direction of machining)	R_z << 10 µm	R_z << 20 µm	R_z << 25 µm
Min. contact pressure	p > 50 MPa	p > 50 MPa	p > 50 MPa
Max. service temperature	400 °C	400 °C	400 °C

*The figures are intended as a guide. On request, we will be pleased to provide you with a drawing frame for your specification.

Diagram of an EKagrip® friction shim



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.

Managementsystem zertifiziert nach ISO TS 16949, DIN EN ISO 14001. EKagrip® ist eine eingetragene Marke der ESK Ceramics GmbH Co. KG.

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