

TECHNICAL DATA

	Material	Form deviation	Diameter tolerance	Hardness Vickers	Density g/cm³	Surface finish Ra
Ball ruby	<i>Synthetic ruby</i>	< 0.2µm	± 0.2µm	1800	3.9	0.01µm
Ball ceramic	<i>Alumina oxide</i>	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Cylinder ruby	<i>Synthetic ruby</i>	< 1µm	± 1µm	1800	3.9	0.05µm
Cylinder TC	<i>WC+Co</i>	< 1µm	± 1µm	1550	15.0	0.2µm
Cylinder steel	<i>Stainless steel</i>	< 2µm	± 2µm	250	7.9	0.4µm
Ball disc ceramic	<i>Alumina oxide</i>	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Ball disc steel	<i>Stainless steel</i>	< 3µm	± 3µm	250	7.9	0.4µm
Disc styli hardened	<i>Hardened steel</i>	< 2µm	± 2µm	720	7.9	0.2µm
Styli shaft, Extension steel	<i>Stainless steel</i>	—	—	—	7.9	—
Styli shaft, Extension ceramic	<i>Alumina oxide</i>	—	—	—	3.9	—
Styli shaft, Extension carbon	<i>Carbon fiber</i>	—	—	—	1.5	—
Styli shaft TC	<i>WC+Co</i>	—	—	—	15.0	—
Extension Alu 7075	<i>Special aluminium</i>	<i>Hard-coat anodized with PTFE</i>			2.8	—

Used material for styli and accessories

Material	Advantage	Disadvantage
<i>Stainless steel</i>	<ul style="list-style-type: none"> • Standard material for most applications • Body and shaft in one piece • Cost-efficient 	<ul style="list-style-type: none"> • Small bending strength for very small shaft diameter
<i>Tungsten carbide (TC)</i>	<ul style="list-style-type: none"> • High bending strength even for very small shaft diameter • Optimal proportions between shaft and ball diameter 	<ul style="list-style-type: none"> • Higher weight for large styli
<i>Ceramic</i>	<ul style="list-style-type: none"> • High bending strength at very low weight • Can be used for long styli 	<ul style="list-style-type: none"> • Danger of breakage for small shaft diameter
<i>Carbon fiber</i>	<ul style="list-style-type: none"> • Extremely low weight • High bending strength for long components with large cross-section 	<ul style="list-style-type: none"> • Small bending strength for small cross-section
<i>Alu 7075</i>	<ul style="list-style-type: none"> • Low weight with very high strength • Wear-protected surface due to hard-coated anodizing with PTFE 	<ul style="list-style-type: none"> • Danger of breakage for very small cross-section.