

## Polishing Pads

Polishing pads are used as carrier of polishing slurries and are considered as alternative materials for polishing pitches. In dependence on glasses or crystals that should be polished as well as on the surface characteristics that should be achieved one distinguishes a few polishing pad materials based on polyurethane, felt, and suede. The polyurethane polishing pads are **hard** and help to achieve very good surface flatness (below  $\lambda/300$  per inch), but usually at the expense of surface smoothness (increasing of surface roughness up to 0.5-1nm). The felt polishing pads are less hard (**intermediate**) and are recommended as compromise materials to achieve standard optical flatness ( $\lambda/10$  per inch) along with standard optical roughness (0.1-0.5nm). The suede polishing pads are **soft** and serve first of all to achieve the maximal possible surface smoothness (roughness below 0.1nm), but at the expense of surface flatness. The suede polishing pads should be used only for finishing for a few minutes to improve the surface smoothness and not to lose much surface flatness. Certainly the surrounding conditions as well as the quality of polishing slurries influence the final result of the polishing.

### hard polishing pads

name	density (g/cm <sup>3</sup> )	compressibility (%)	size (mm)	special proceeding	price (EUR/pc)
OXAPA polishing pad hard 03	1.1	0.3	1524x1524x2.29	Sitall, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA D5,D05 or OXAPA AL1, AL03	1,217
OXAPA polishing pad hard 1	0.9	1	1524x1524x1.27	Sitall, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA D5,D05 or OXAPA AL1, AL03	996
OXAPA polishing pad hard 4	0.6	4	635x635x1.27	ZnS, ZnSe, BaF2, CaF2, LiF, MgF2, IKS glasses, Ge, Si with OXAPA D5, D05	272
OXAPA polishing pad hard 8 (with cerium oxide)	0.5	8	1016x1016x1.27	glass ceramics, fused silica, standard optical glasses with OXAPA ... SP, OXAPA ... 69, OXAPA ... N	461

### intermediate polishing pads

name	density (g/cm <sup>3</sup> )	compressibility (%)	size (mm)	special proceeding	price (EUR/pc)
OXAPA polishing pad intermediate 5	0.4	5	1524x1524x2.29	standard optical glasses with OXAPA ... SP, OXAPA ... 69 OXAPA ... N, OXAPA ... PLUS	848
OXAPA polishing pad intermediate 11	0.3	11	1524x1524x1.27	Sitall, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA D5,D05 or OXAPA AL1, AL03	805
OXAPA polishing pad intermediate 12	0.4	12	1524x1524x1.27	Sitall, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA D5,D05 or OXAPA AL1, AL03	1,100

**soft polishing pads**

<b>name</b>	<b>density (g/cm<sup>3</sup>)</b>	<b>compressibility (%)</b>	<b>size (mm)</b>	<b>special proceeding</b>	<b>price (EUR/pc)</b>
OXAPA polishing pad soft 4	0.4	4	1346x1346x1.65	glass ceramics, fused silica standard optical glasses with OXAPA ... PLUS, OXAPA ... NANO  Sital, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite, IKS glasses BaF2, CaF2, LiF, MgF2, Ge, Si with OXAPA SOL, OXAPA D01  ZnSe, ZnS, Sital, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA AL 015	1,063
OXAPA polishing pad soft 19	0.4	19	1380x1380x1.5	glass ceramics, fused silica standard optical glasses with OXAPA ... PLUS, OXAPA ... NANO  Sital, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite, IKS glasses BaF2, CaF2, LiF, MgF2, Ge, Si with OXAPA SOL, OXAPA D01  ZnSe, ZnS, Sital, Zerodur, Cleaceram, Spinel, crystalline quartz, sapphire, YAG, Forsterite, Alexandrite with OXAPA AL 015	234