Finish Selection Matrix (Resin x Function x Finish)

Quick reference for selecting plastic surface finishes by resin and part function. Use with actual supplier plaques and your resin/color master.

Resin	Typical Parts	Notes	Suggested Finish
PC/ABS	Bezels, trims	Balanced, paintable	Fine VDI 12-18 or satin; hide flow lines
PC (Optical)	Lenses, light guides	Clarity, stress-sensitive	SPI A-1/A-2; Ra <= 10-20 nm; polish-retention steel
PMMA	Outer lenses	Best clarity, scratch-prone	SPI A-1/A-2 + optional hard-coat
PP/PE	Large panels	Lower stiffness	Medium VDI 18-24 for scuff hiding
PA6/PA66 (GF)	Mounts, brackets	Fiber print-through	Deeper micro-grain; validate read-through
PC+PBT	Signal housings	Chemical resistance	Satin or VDI 15-21, paint-ready where needed

Note: Always confirm gloss (GU), haze (%), and color dE on molded plaques with the actual resin, masterbatch, and lighting conditions.