

# ALLOY SELECTION GUIDE

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Numerous factors influence material selection. Most important are mechanical properties, choice of casting process, and manufacturing characteristics. Rated are the general design features of zinc alloys, which can influence material selection.

Comparison Ratings <sup>1</sup>	No.3	No.5	No.7	No.2	ZA-8	ZA-12	ZA-27
Die Castability <sup>2</sup>	E	E	E	E	VG	VG	G
Sand Castability	NR	NR	NR	G	G	E	F
Perm. Moldability	NR	NR	NR	G	VG	E	F
Strength	G	G	G	VG	VG	E	E
Ductility	E	VG	E	VG	VG	G	F
Impact	E	E	E	G	VG	G	F
Bearing/Wear	G	G	G	VG	VG	E	E
Machinability	E	E	E	E	E	VG	G
Pressure Tightness	E	E	E	E	VG	E	F
Plating	E	E	E	E	VG	G	NR <sup>3</sup>
Zinc Anodizing	E	E	E	E	E	E	VG
Chromating	E	E	E	E	VG	G	F
Painting	E	E	E	E	E	E	E
Dimensional Stability	E	E	E	VG	VG	VG	F
Anti-Sparking	E	E	E	E	E	E	F <sup>4</sup>

E = excellent VG = very good G = good F = fair NR = not recommended

<sup>1</sup> General performance ratings which can vary depending upon process selection.

<sup>2</sup> Alloy Nos. 3,5,7,2, & ZA-8 are hot chamber die cast; ZA-12 & ZA-27 are cold chamber die cast.

<sup>3</sup> ZA-27 can be plated using special techniques. However, it is not normally recommended for plating.

<sup>4</sup> High aluminium content of ZA-27 reduces anti-sparking rating.

