



Have You Considered Zinc?

Cost Effective

Easy Machining

Strong

Corrosion Resistant

Good Wearability

Light Weight

Non-Sparking

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Delicate, complex castings are possible due to Zinc's excellent casting properties.

Why Use Zinc?

Modern Zinc alloys make sense for many applications in today's world. It is strong, durable, corrosion resistant, wear resistant, easy to machine and costs less than bronze or aluminum. It also weighs less than bronze and is non-sparking.

One example is a seven inch diameter bearing gear cover that had been manufactured of cast bronze for many years. Looking for a lower cost alternative, it was decided to try zinc. The cost of production was cut in half.

After two years of testing it was found that the zinc would actually outwear the bronze. In fact, a bronze part would often break down long before a zinc part needed to be replaced.

Another benefit was that the zinc parts were 43 percent lighter than the same bronze part.

Zinc is environmentally friendly. Because of its lower melting temperature it requires less energy to bring it to the pouring temperature. The quality of the material remains stable indefinitely and is totally recyclable.

	Material	Tensile Strength (KSI)	Yield Strength (KSI)	Elongation (% in 2")	Density (lb/in3)	KWH/Ton	BTU/Ton	CO2 Kg/Ton
Metals	ZA-12	40-46	30	1-3	.218	130	443,690	55
	AL 319*	27	18	3.5	.101	400	1,365,200	170
	AL 356-T6*	33	24	3.5	.097	400	1,365,200	170
	AL 713*	30	22	3	.104	400	1,365,200	170
	Manganese Bronze 421 (CDA 865)	71	28	30	.283	220	750,860	94
	Silicon Bronze 500	50	20	30	.295	320	1,092,160	136
	Everdur CDA 973							
	Silicon Brass 500	67	30	21	.290	300	1,023,900	128
	Tombasil CDA 876							
Cast Iron Class 30*	30-34				.260	500	1,706,500	213
Plastics	ABS	8						
	Polycarbonate	9						
	Nylon 6 (30% glass reinforced)	22						
	PET (30% glass reinforced)	21						
	PBT (30% glass reinforced)	18						

* Requires degassing, grain refinement, and modification of Silicon during melting that liberates harmful byproducts to the atmosphere