DIE-CASTING COPPER ALLOYS

Different Die-casting Copper Alloys Grade, Chemical Composition, Mechanical Properties, and Application

GRADE	ALLOY CODE	CHEMICAL COMPOSITION (MASS FRACTION) (%)								MECHANICAL PROPERTIES ≥		
		Cu	Pb	Al	Si	Mn	Fe	Zn	TOTAL IMPURITIES ≤	TENSILE STRENGTH Бb/Mpa	ELONGATION δ5 (%)	BRINELL HARDNESS HBW 5/250/30
YZCuZn16Si4	**YT16-4**	79.0~81.0			2.5~4.5			Margin	2.0	345	25	85
CHARACTERISTICS & APPLICATIONS		Good plasticity and corrosion resistance, high strength, excellent casting performance, average machinability and wear resistance. Suitable for manufacturing pipe fittings, valve bodies, covers, and various castings with complex shapes that work in ordinary corrosive media.										
YZCuZn30Al3	**YT30-3**	66.0~68.0		2.0~3.0				Margin	3.0	400	15	110
CHARACTERISTICS & APPLICATIONS		High strength, high wear resistance, good casting performance, good resistance to atmospheric corrosion, average resistance to other media, poor processability. Suitable for producing various corrosion-resistant parts that work in the air.										
YZCuZn35Al2Mn2Fe	**YT35-2-2-1**	57.0~65.0		0.5~2.5		0.1~3.0	0.5~2.0	Margin	2.0	475	3	130
CHARACTERISTICS & APPLICATIONS		Good mechanical properties, good castability, and good corrosion resistance in the atmosphere, seawater, and freshwater. Suitable for making wear-resistant parts for pipeline fittings and general requirements.										
YZCuZn40Pb	**YT40-1**	58.0~63.0	0.5~1.5	0.2~0.5				Margin	1.5	300	6	85
CHARACTERISTICS & APPLICATIONS		Good plasticity, high wear resistance, excellent machinability and corrosion resistance, but low strength. Suitable for making wear-resistant and corrosion-resistant parts for general purposes, such as shaft sleeves, gears, etc.										

Remark: Table of Grades, Chemical Composition, Mechanical Properties, and Applications of Die Cast Copper Alloys (Extracted from GB/T 15116-1994)