



ALLOY

C35330

Data Sheet

Typical Chemistry & Mechanical Properties

Alloy Number	Name	Nominal Chemical Composition	Tensile Strength (KSI)	Yield Strength (KSI)	Elongation %	Rockwell B Hardness	Remarks
UNS C35330	DZR Brass	Cu: 59.5~64.0% Pb: 1.5~3.5% As: 0.02~0.25% Zn: Rem	54	24	30%	65	Dezincification resistant brass suitable for high speed machining applications

Straightness Tolerances

Round	All Sizes	1/4" in any 10' portion
Hexagonal/Octagonal	Up to 4.000" >4.000"	3/8" in any 10' portion As Extruded
Square/Rectangle	All Sizes	3/8" in any 10' portion

Drawn Length Tolerances

0.250" to 2.000" (Inclusive)	+/-0.500"
2.000" to 3.000" (Inclusive)	+/-0.500"
3.000" to 4.000" (Inclusive)	+/-0.500"

Notes:

Standard Lengths: 12', 14', 15' & 16'
All other lengths considered non-standard
Minimum Length: 9' – 11" (119")

Shapes and Sizes

Round	0.250" to 4.000"
Hexagonal/Octagonal	0.250" to 3.500"
Square/Rectangle	0.375" to 2.000"

Diameter Tolerances

	Round	Hexagonal
0.250" to 0.375" (Inclusive)	+/- 0.0015"	+/- 0.0030"
0.375" to 0.500" (Inclusive)	+/- 0.0015"	+/- 0.0030"
0.500" to 1.000" (Inclusive)	+/- 0.0020"	+/- 0.0040"
1.000" to 2.000" (Inclusive)	+/- 0.0025"	+/- 0.0050"
2.000" to 2.500" (Inclusive)	+/- 0.0030"	+/- 0.0060"
2.500" to 3.000" (Inclusive)	+/- 0.0035"	+/- 0.0075"
3.000" to 3.500" (Inclusive)	+/- 0.0045"	+/- 0.0090"
3.500" to 4.000" (Inclusive)	+/- 0.0050"	+/- 0.0100"



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Machinability: Alloy C35330 provides the best combination of free machining & corrosion resistance. The alloy possess a machinability of 100% (in relation to C36000 alloy). The recommended tool design, feeds & speeds for machining this material are as follows:

	Speed (sfpm)	Feed (ipr)	Back Rake Angle (degrees)	Clearance Angle (degrees)
Lathe Turning Tools:	300~1,000	0.002~0.015	0~5	6
Drills (118°):	300~1,000	0.003~0.020	0	12~15
Milling Cutters:	200~500	0.015~0.030	0~3	12~15
Form Tools (1/2°):	300~1,000	0.001~0.003	7~12	7~12
Taps:	100~200 (lineal)		2~4	

Synthetic soluble oil is recommended as the cutting fluid. A light paraffin oil with an addition of 5-10% lard oil is recommended for threading & tapping operations. For longer running jobs, carbide tooling is recommended.

Workability:

Cold Working Capacity:	Excellent
Thread Rolling:	Excellent
Cold Heading:	Good
Hot Working Capacity:	Poor
Machinability Rating:	100%

Spec. Equal.: AS 1567 – C35330 BS 2873 – C2119 ASTM453

Applications: The alloy is best suitable where potential corrosion (such as dezincification) may occur. Applications for this alloy include plumber's hardware, valve spindles & fittings.

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