MBA

Miniature Bearings Australia

www.minibearings.com sales@minibearings.com.au

Bearing Tolerances (316 & Plastic)

Bearings made from 316 stainless steel or plastic compounds do not have the same precision tolerances as do 440C Stainless Steel and SAE52100 chrome steel bearings.

Note! 316 Stainless Steel is not a standard bearing steel and is less precise and softer than standard bearing stainless steel.

This table covers tolerances for bearings made from 316 stainless steel or plastic.

Bearing Size	**Tolerance in *u*m**
Bore <= 19.050 mm	0.000 / +76.200
Bore > 19.050 mm	0.000 / +101.600
OD <= 25.400 mm	-76.200 / 0.000
OD > 25.400 and <= 41.275	-101.600 / 0.000
OD > 41.275 and <= 50.800	-127.000 / 0.000
OD > 50.800	-152.400 / 0.000
Width	0.000 / +127.000

1 mm = 0.03937 of an inch. 1 micron (um) = 0.00003937 of an inch. To obtain the tolerance in inches multiply the figure shown by 0.00003937, eg. 76.2 um x 0.0000397 = 0.002999994 inches (about 3 thou.)

Dimensions are in 0.001 mm (thousandths of a mm)






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Tolerances in Simple Terms:

A tolerance is the amount of variation allowed. If I require a box of 1000 screws +/- 5, this means I can accept a box containing anything from 995 to 1005 screws. If a supplier states they can supply a box of 1000 +/- 2, this means their box contains anything from 998 to 1002 screws. The higher accuracy still meets my requirement of +/- 5. The same principle applies for tolerances of size, clearance, hardness or anything else.

See also
Ball Grades information sheet
Abec information sheet
Bearing Precision general notes
Measuring Small Parts
Bearing Tolerances (440C & Chrome Steel)

Dimensions are in 0.001 mm (thousandths of a mm)