

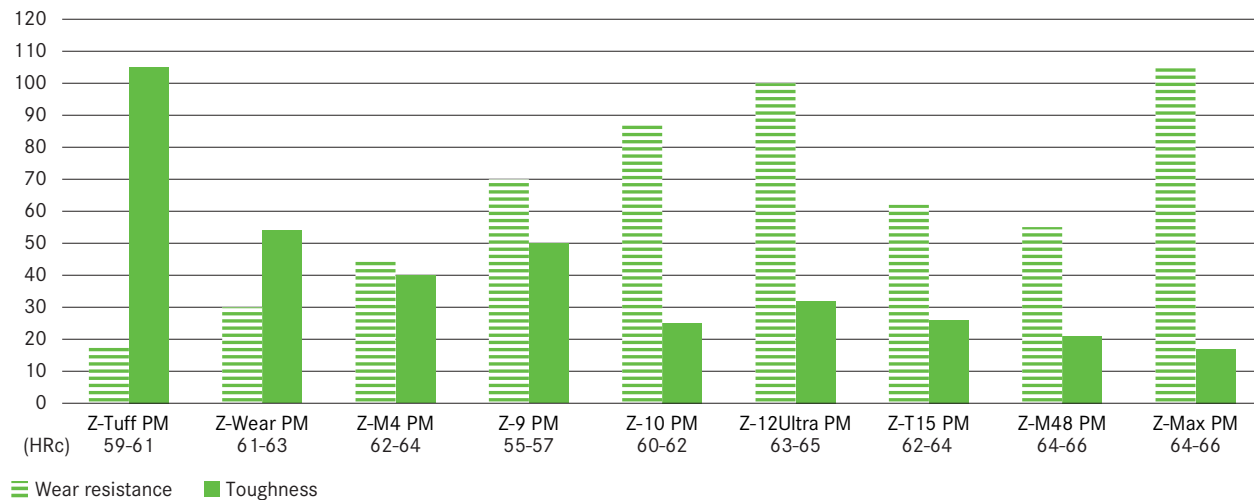
ZAPP TOOLING ALLOYS INC. Z-SERIES POWDER METAL TOOL STEELS ENGINEERED SOLUTIONS

ZAPP

Z-SERIES PM STEELS / CHEMICAL COMPOSITION

Zapp Grade Name	C	Cr	Mo	W	V	Co	Ni
Z-Tuff PM	0.70	7.50	2.00	-	1.00	-	1.50
Z-Wear PM	1.15	7.50	1.60	1.00	2.40	-	-
Z-M4 PM	1.42	4.00	5.25	5.50	4.00	-	-
Z-9 PM	1.90	5.25	1.30	-	9.00	-	-
Z-10 PM	2.45	5.25	1.30	-	9.75	-	-
Z-12Ultra PM	2.48	4.20	3.10	4.20	8.00	-	-
Z-T15 PM	1.60	4.00	-	12.00	4.90	5.00	-
Z-M48 PM	1.50	4.00	5.25	9.75	3.10	9.00	-
Z-Max PM	2.00	4.00	5.00	10.00	5.00	9.00	-
Z-420 PM	2.30	14.00	1.00	-	9.00	-	-

COMPARISON OF MATERIALS



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Zapp Tooling Alloys, Inc. (Production)
8100 100th Street
Pleasant Prairie, Wisconsin 53158

ZAPP TOOLING ALLOYS INC.
 Z-SERIES POWDER METAL TOOL STEELS
 ENGINEERED SOLUTIONS



Z-SERIES PM STEELS / STANDARD INVENTORY SIZE RANGES

Zapp Grade Name	Round Bar* from/to (inches)	Machined Plate* from/to (inches)	Sheet* from/to (inches)
Z-Tuff PM	.515" - 12.125"	12" Block	.140" - .290"
Z-Wear PM	.265" - 12.125"	.540" - 3.04", 8" Block	.120" - .420"
Z-M4 PM	.188" - 15.125"	.540" - 3.54", 8" Block	.070" - .420"
Z-9 PM	.765" - 6.062"	8" Block	Sizes available upon request
Z-10 PM	.265" - 12.125"	.540" - 4.04", 8" Block	.056" - .420"
Z-12Ultra PM	1.015" - 10.125"	.540" - 1.54", 8" Block	.120" - .172"
Z-T15 PM	.515" - 1.765"	.540" - 2.04", 8" Block	.085" - .420"
Z-M48 PM	-	1.04" - 2.04", 8" Block	Sizes available upon request
Z-Max PM	1.015" - 10.125"	1.04" - 1.54", 8" Block	Sizes available upon request
Z-420 PM	.640" - 5.562"	8" Block	.140" - .290"

*Custom diameters and thicknesses available on request

*Z-Squared two, four, & six side custom in-house milling available upon request.



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