

**Technical Data:**

**Product Description**

Metal injection molded tool steels like A2, M2, M4, D2, S7, H13, and T15 offer an unparalleled combination of hardness, wear resistance, impact strength, and dimensional precision. MIM technology uses fine tool steel powders to injection mold intricate components with superior properties to machining or casting. From cold work punches to hot extrusion dies, tool steel MIM empowers engineering durable, high-performance parts tailored for demanding applications across diverse industries.

**Features and Applications**

Grade	Features	Applications
MIM-A2	High wear resistance and toughness	Automotive components, machinery parts
MIM-M2	Excellent heat resistance and wear properties	Tools, gears, industrial machinery components
MIM-M4	High abrasion resistance and impact strength	Aerospace components, heavy machinery parts
MIM-D2	Exceptional wear resistance and hardness	Medical instruments, consumer electronics
MIM-S7	High-impact strength and machinability	Electronics, jewelry
MIM-H13	Excellent thermal conductivity and hot hardness	Bearings, precision instruments, automotive
MIM-T15	Exceptional wear resistance at high temperatures	Gears, shafts, structural components

**Chemical Composition**

Element	Carbon (C)	Manganese (Mn)	Silicon (Si)	Chromium (Cr)	Molybdenum (Mo)	Vanadium (V)	Other Elements
MIM-A2	1.00%	0.80%	0.30%	5.00%	0.90%	0.20%	-
MIM-M2	0.85%	0.30%	0.30%	4.20%	5.00%	6.40%	-
MIM-M4	1.30%	0.20%	0.25%	4.00%	4.75%	5.25%	-
MIM-D2	1.55%	0.40%	0.40%	11.50%	0.85%	0.20%	-
MIM-S7	0.50%	0.70%	1.00%	3.25%	1.40%	-	-
MIM-H13	0.40%	0.40%	1.00%	5.00%	1.30%	0.95%	-
MIM-T15	1.30%	0.20%	0.20%	4.00%	9.00%	4.00%	Cobalt (Co): 5.00%

**Physical and Mechanical**

Alloys	Status	Tensile Strength	Yield Strength	Impact Strength	Hardness	Young's Modulus	Poisson's Ratio	Elongation	Density
		Mpa	Mpa	J	HRB	Gpa	Ratio	% in 25.4 mm	g/cm <sup>3</sup>
MIM-A2	HT	860	660	18	60	210	0.29	10	7.86
MIM-M2	HT	1100	950	20	65	200	0.28	8	8.19
MIM-M4	HT	1000	850	23	64	200	0.28	10	8.23
MIM-D2	HT	900	800	12	61	195	0.29	7	7.83
MIM-S7	HT	900	600	15	45	195	0.29	14	7.83
MIM-H13	HT	1800	1600	30	48	205	0.29	8	7.81
MIM-T15	HT	1800	1600	20	66	235	0.28	3	8.72

**Note**

The above data are reference material science data. This data reference is not binding and is not considered as authoritative test data. If your material requirements are extremely precise, please contact our material engineers. Tel | +86 18926788217 | Web | [www.newayprecision.com](http://www.newayprecision.com) | Contact Neway

