Physical Properties of Magnesium Wrought Alloys (at room temp.)

Alloy	Density (g/cu cm)	Liquidus Temp (C)	Solidus Temp (C)	Ignition Temp (C)	Thermal Conductivity
AZ31B	1.78	632	566	581	76.9
AZ61A	1.8	610	525	559	80
AZ80A	1.086	610	490	542	47.3
ZK60A	1.83	635	520	499	121

Chemical composition of Magnesium Wrought Alloys (%).

Alloy	Al	Mn	Zn	Ca max	Si max	Cu max	Ni max	Fe max	Zr max	Other max	Mg
AZ31B	2.5-3.5	0.2-1	0.6-1.4	0.04	0.1	0.05	0.005	0.005		0.3	Balance
AZ61A	5.8-7.2	0.15-0.5	0.04-1.5		0.1	0.05	0.005	0.005		0.3	Balance
AZ80A	7.8-9.2	0.12-0.5	0.2-0.8		0.1	0.05	0.05	0.005		0.3	Balance
ZK60A			4.8-6.2						0.45	.3	Balance

Mechanical Properties of Magnesium Wrought Alloys (at room temp.)

Alloy	Form	Tensile strength		Tensile yield strength (I)		Elongation (II)	Hardness		Shear strength		Compressive yield strength (I)	
		MPa	ksi	MPa	ksi	%	HB (III)	HRE	MPa	ksi	MPa	ksi
AZ31B	Extrusion	255	37	200	29	12	49	57	131	19	97	14
	Forging	262	38	172	25	15	50	59	131	19		
	Sheet: hard rolled	290	42	221	32	15	73	83	159	23	179	26
AZ61 A	Extrusion	303	44	207	30	16	60	72	138	20	131	19
	Forging	296	43	179	26	12	55	66	145	21	124	18
AZ80A-T5	Extrusion	379	55	276	40	7	80	88	165	24	241	35
	Forging	345	50	248	36	6	72	82	159	23	193	28
ZK60A-T5	Extrusion	352	51	283	41	11	82	88	179	26	248	36
	Forging	303	44	214	31	16	65	77	165	24	159	23

(I) At 0.2% offset. (II) In 50 mm (2in.). (III) 500 kg load, 10 mm ball.