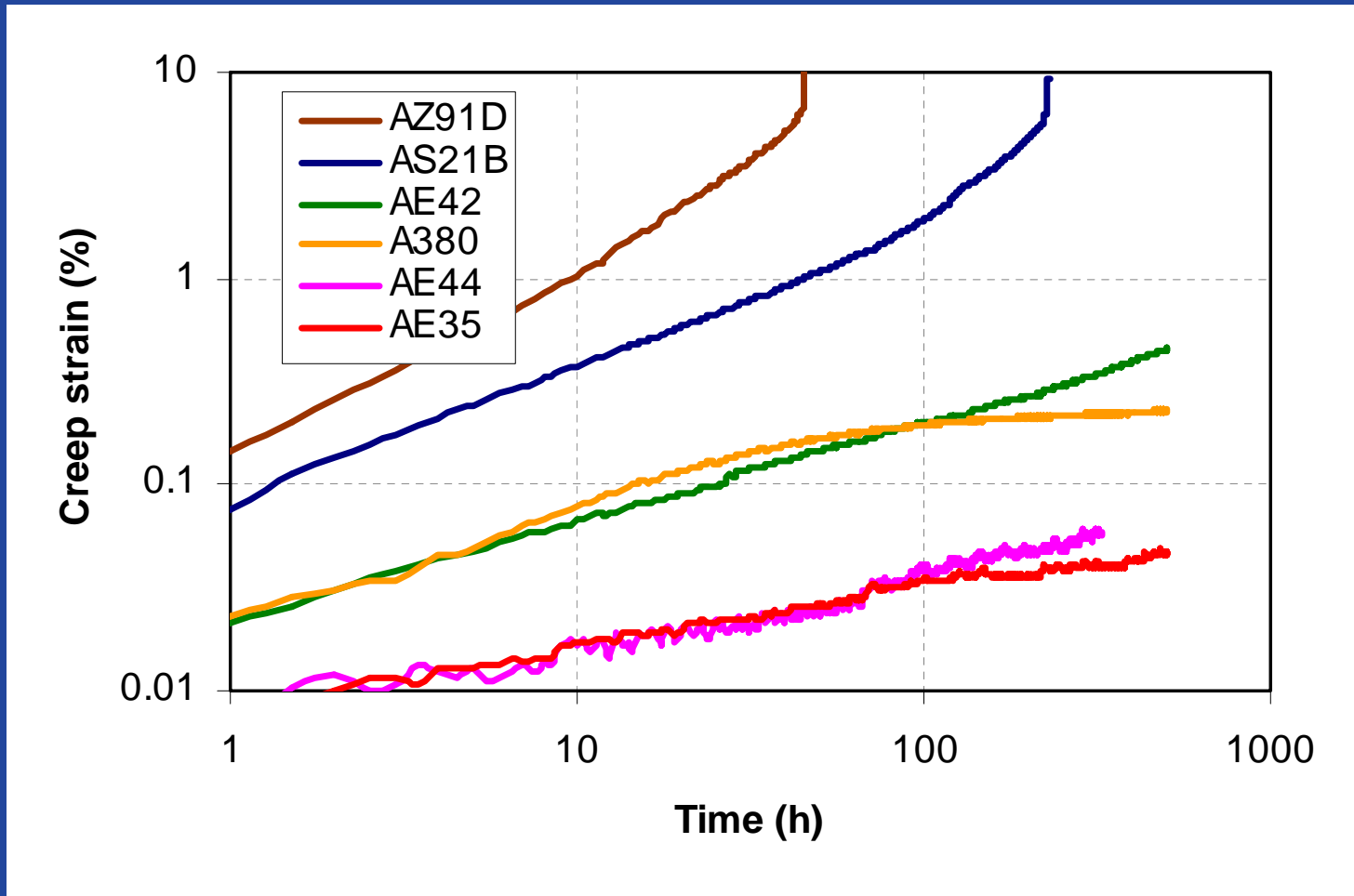


Material Properties															
Mechanical Properties	Magnesium											Aluminum		Zinc	
	AZ91D	AM50A	AM60B	AM20	AE42	AE44	AS31	MRI 153M	MRI 230D	AS21	AJ62	A380	A383	AG40A	ZA27
Ultimate Tensile Strength (Mpa)	248	247	237	206	237	245	216	250	235	230	227	320	310	283	426
Yield Strength (Mpa)	148	123	116	9	134	142	130	170	180	125	138	160	150		365
Elongation % ub 2 in (51mm)	7	12	14	16	8 - 10	10	8	6	5	16	7	3.5	3.5	10	2
Hardness Brinell	70	65	60	45	60	62		72	71	55	61	80	75	82	115
Elastic Modulus (Gpa)	45	45	45	45	45	45	45	45	45	45	45	71	71		78
Charpy Impact (unnotched) (J)	6	17	18	18	18	15		8	6	12	13.3	4	4	53	4
Fatigue Strength (Mpa)	97	84	90		80	72.5	120	110		75		140	140	48	103

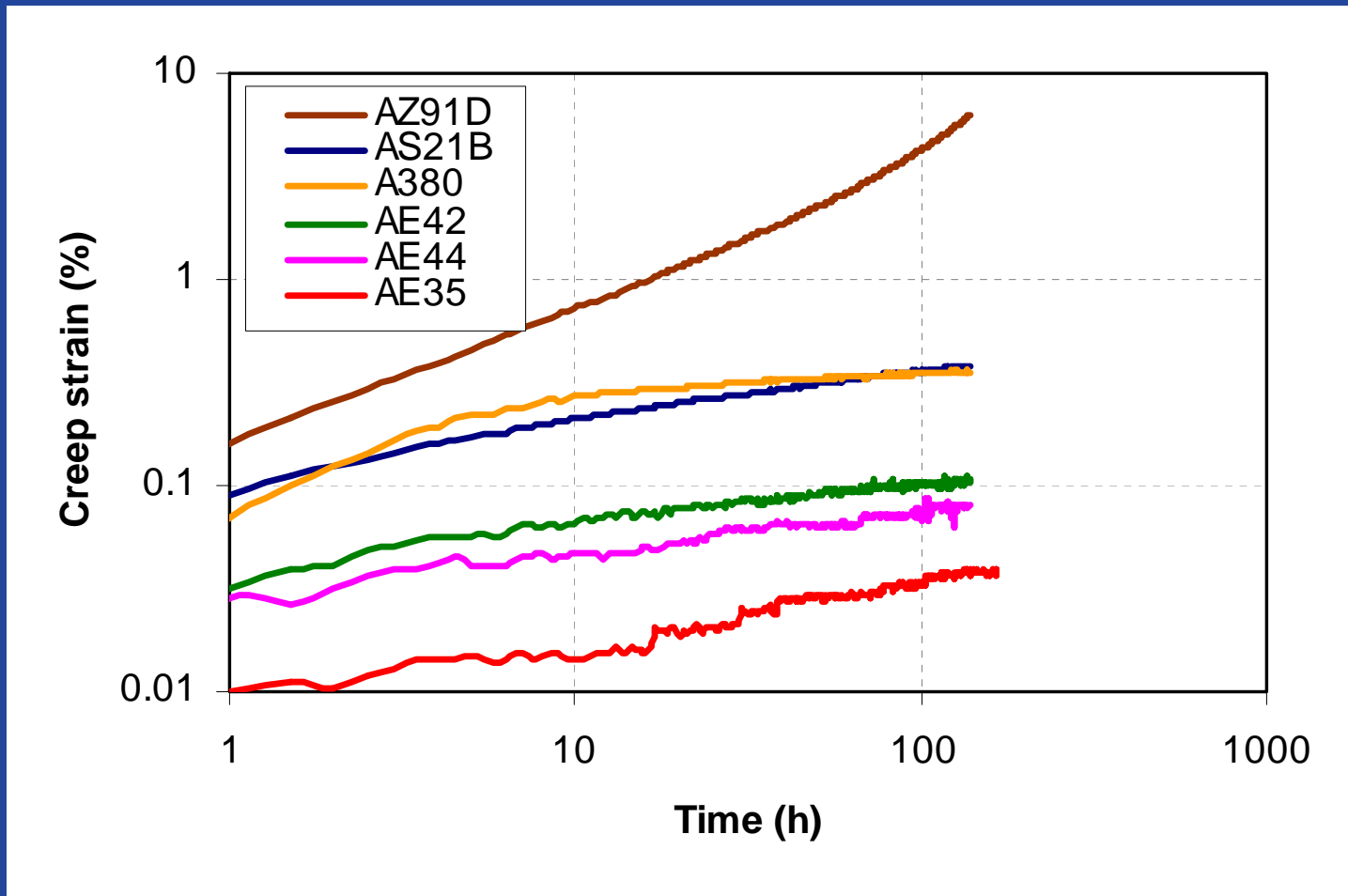
Physical Properties	Magnesium											Aluminum		Zinc	
	AZ91D	AM60B	AM50A	AM20	AE42	AE44	AS31	MRI 153M	MRI 230D	AS21	AJ62	A380	A383	AG40A	ZA27
Density (g / cm <sup>3</sup> )	1.81	1.80	1.77	1.75	1.79	1.82	1.76	1.82	1.82	1.76	1.8	2.74	2.74	6.6	5.0
Melting Range (C)	420-598	420-615	420-620	420-638	594-626	572-620	420-630	508-602	525-606	420-632	612	540-595	557-596	381-389	375-484
Specific Heat (kJ/kg k)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.09	1.04	1.02		0.963	0.963	0.418	0.418
Coefficient of Thermal Expansion (um / m - k)	26	26	26	26	26.1	26.1	26.1	25.9	25.1	26.1	27.3	22	(22.0)	27.4	26
Thermal Conductivity (W / m - k)	51	61	65	94	84	84	64	77		84	77	96	96	113	123
Electrical Conductivity MS/m	6.6		9.1	13.1	11.7	11.7				10.8	25	27	23	27	30
Corrosion Rate mg/cm <sup>2</sup> /day	0.039252	0.07819	0.081879	0.942308	0.013469	0.007		0.09	0.1	0.1574	0.04	0.34	0.263889		

Sources: HydroMagnesium September 2005, ASM Handbook; Magnesium & Magnesium Alloys, Dead Sea Magnesium, Noranda Magnesium Data

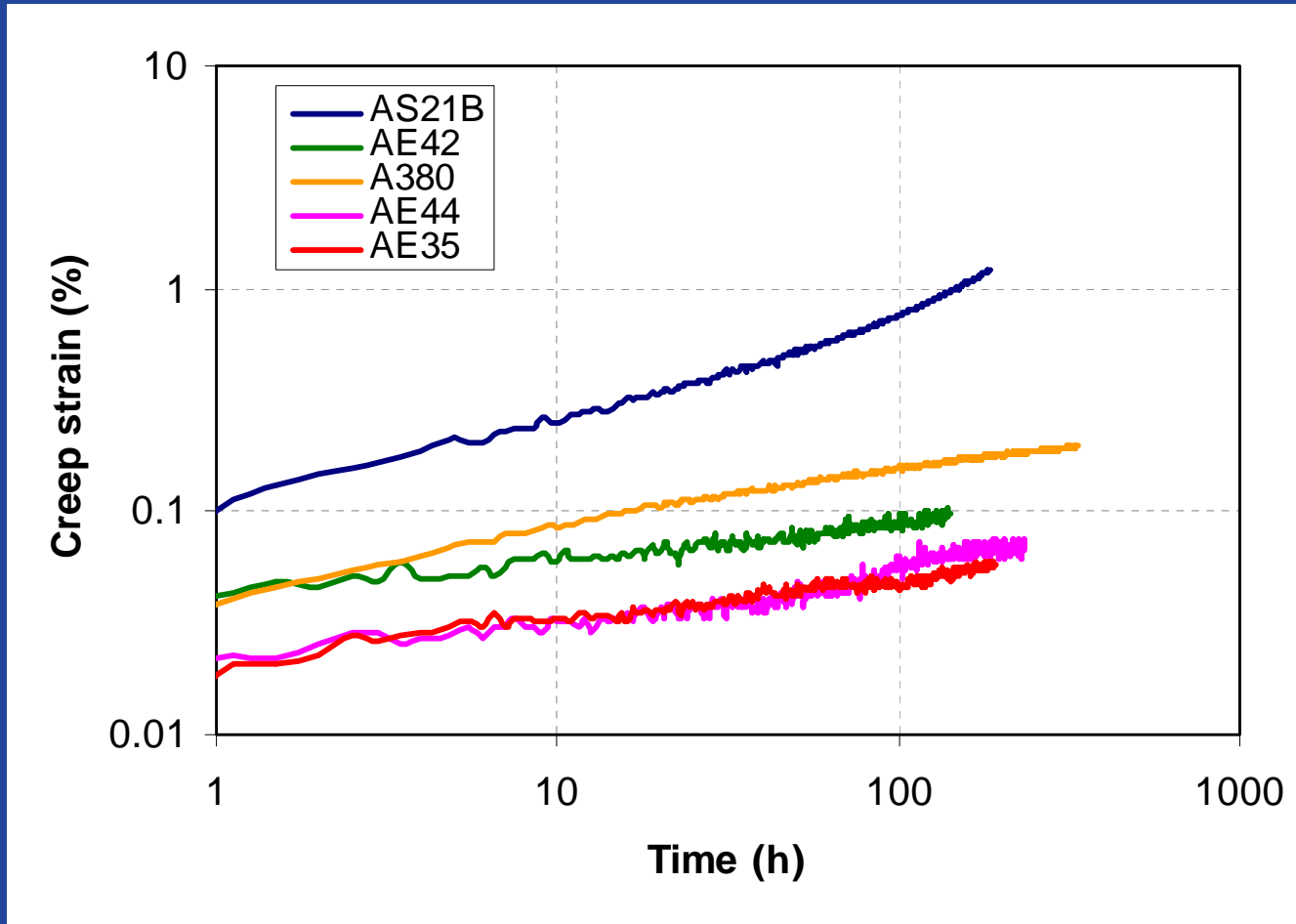
# Creep Strain at 150°C / 90 MPa



# Creep Strain at 175°C / 40 MPa



# Creep Strain at 175°C / 50 MPa



# Creep Strain at 175°C / 75 MPa

