



Chemical Composition % (by weight)			LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Pb			75,8	82,2	2	-	-	-	-
Sn			6	6	80	89	88	81	81,3
Sb			15	10	12	7,5	7,5	12	12
Cu			1,2	0,8	6	3,5	3,5	5	6
Ni			0,5	-	-	-	0,2	0,3	-
As			0,5	0,5	-	-	-	0,5	-
Cd			1	0,5	-	-	0,8	1,2	-
Zn			-	-	-	-	-	-	0,6
Ag			-	-	-	-	-	-	0,1
Technological Characteristics*)			LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Hardness and elevated temperature Hardness									
HB 10/250/180		20°C	26	22	27	23	28	35	24
		50°C	21	20	23	17	23	28	20
		100°C	14	13	13	10	16	17	12
		150°C	8	10	7	8	9	10	10
Tensile stress									
0,2% ultimate strength	Rp0,2	N/mm²	28	33	62	46	66	84	76
Tensile strength	Rm	N/mm²	57	59	89	77	100	102	78
Tension strain	A5	%	1,2	2,2	3	11,2	8,4	1,5	1
Technical elastic limit	Rp0,01	N/mm²	29900	29600	55700	56500	49500	52500	57000
Compressive stress			20°C / 100°C	20°C / 100°C	20°C / 100°C	20°C / 100°C	20° C / 100°C	20°C / 100°C	20°C / 100°C
0,2% compressive strength	σd0,2	N/mm²	46 / 27	35 / 25	62 / 37	47 / 27	63 / 30	80 / 48	90 / 50
2% compressive strength	σd2	N/mm²	85 / 59	76 / 48	87 / 69	76 / 45	103 / 60	122 / 80	107 / 64
Compressive strength	σdB	N/mm²	134 / 83	158 / 98	189 / 121	157 / 100	235 / 136	195 / 126	190 / 91
Compressive strain	ε dB	%	34 / 37	43 / 47	46 / 53	47 / 50	39 / 44	34 / 34	36 / 44
Bond strength (steel C10; babbitt thickness ≥ 6mm) (DIN ISO 4386, part 2)									
	RCH	N/mm²	57	59	39	75	86	98	71
Dynamic test									
Alternating bending strength	σbw	N/mm²	±28	±28	±28	±29	±33	±39	±35
Impact fatigue bending strength									
Mean number of impacts up to rupture			285	330	490	3741	2689	910	2856
Mean impact energy up to rupture	J		77	96	134	1028	739	250	785
Physical properties*)			LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Density	ρ	kg/dm³	9,84	10,5	7,39	7,4	7,35	7,34	7,35
Linear expansion coefficient 20-100°C(mm/mm ·°C) x 10 ⁻⁶			24,7	24,5	21,6	23,4	23,8	20,2	21
Thermal analysis									
Lower melting poing		°C	243	242	183	233	233	235	235
Upper melting point		°C	420	420	400	360	360	390	360
Casting Temperature		°C	520	500	520	440	440	520	520

*) The given values represent average values

Characteristics	LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Lead-based Babbitt Alloy Tin-based Babbitt Alloy	X	X	X	X	X	X	X
High Strength High Ductility			X	X	X	X	X
Application Notes	LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Good sliding property, can be used in the mixed friction area		Babbitt alloy for centrifugal casting processes with complicated base body geometry	Medium static loading up to high hydrodynamic circumferential speeds	Free of lead High ductility	Free of lead High ductility	Free of lead Highest static load capacity up to high hydrodynamic circumferential speeds	Alloy free of lead, cadmium, nickel and arsenic
Little sensitive to edge pressure		No segregation during processing	Little sensitive to edge pressure	Highest impact load capacity, medium static load capacity	High static and dynamic load capacity Little sensitive to edge pressure	Resistant against high cycle dynamic load	Highest static load capacity up to high hydrodynamic circumferential speeds
Good embedding capacity for foreign particles		Good sliding property, can be used in the mixed friction area	Good impact load capacity	Resistant against vibrations and alternate bending stress		High hardness at elevated temperature, consequently high load carrying capacity at elevated temperatures	Resistant against high cycle dynamic load
Little segregation during processing		Little sensitive to edge pressure	Obsolete, substituted by TEGO V738®				Good impact load capacity
		Good embedding capacity for foreign particles					Minimum creep deformation, good dimensional stability at elevated temperature
Applications	LM Thermit®	TEGO®-WS	WM 80 (LgSn80) SnSb12Cu6Pb	TEGOTENAX V840 (ASTM B23 G2)	TEGOTENAX S (V 841)	TEGO V738®	TEGOSTAR® 738
Ball and pebble mill bearings		Stern tubes	Turbines	Guide bearings of hydro power units	Main, connecting rod, crosshead bearings for large reciprocating engines	Thrust and journal bearings for high speed turbomachinery	Thrust and journal bearings for high speed turbomachinery
Eccentric bearings for crusher plants		Gears, pinion gears	Compressors	Highly loaded rolling mill bearings	Rolling mill bearings	Generator bearings	Generator bearings
Gears, pinion gears		Electric machines	Electric machines		Bearings for rotary crushers	Support bearings for hydro power units	Reciprocating and expansion engines
Electric machines			Pinions			Reciprocating and expansion engines	Compressors, high speed gears
						Compressors, high speed gears	