

E. F. LA CROSSE SALES, INC.

P. O. Box 64 470 S. Pearl St.
CANANDAIGUA, NY 14424
(716) 394-8043

DIE CASTING ALLOY DATA

SPECIFICATION	Aluminum							Zinc		Zinc-Aluminum			Magnesium
Commercial	380-1%	380-3%	360	218	43	13	Hi-Flo	3	5	ZA-8	ZA-12	ZA-27	AZ91B
SAE	306	308	309	—	304	305	—	J468b 903	J468b 925	—	—	—	501A
ASTM	A380.1	380.1	A360.1	518.1	C443.1	A413.1	—	B86-83 Z35521	B86-83 Z35530	B86-84 Z25830	B86-84 Z35830	B86-84 Z35840	AZ91B
Federal	QQ-A- 591D-10	QQ-A- 591D-11	QQ-A- 591D-12	QQ-A- 591D-7	QQ-A- 591D-3	QQ-A- 591D-2	—	QQ-Z-363B AG40A	QQ-Z-363B AC41A	—	—	—	QQ-M-38B
ELEMENT													
Copper	3.0-4.0	3.0-4.0	0.6	0.25	0.6	0.6	2.0-3.0	0.25	0.75-1.25	0.8-1.3	0.5-1.25	2.0-2.5	0.035
Iron	1.3	2.0	1.1-2.0	1.0-1.8	0.8-2.0	2.0	1.0	0.10	0.10	0.10	0.075	0.10	—
Silicon	7.5-9.5	7.5-9.5	9.0-10.0	0.35	4.5-6.0	9.5-13.0	8.0-10.5	—	—	—	—	—	0.5
Magnesium	0.10	0.10	0.4-0.6	7.5-8.5	0.05-0.10	0.10	0.03	0.02-0.05	0.03-0.08	0.015-0.030	0.015-0.030	0.010-0.020	Balance
Manganese	0.50	0.50	0.35	0.35	0.35-0.50	0.35-0.50	0.30	—	—	—	—	—	0.13
Zinc	1.0	3.0	0.35-0.5	0.15	0.50	0.50	3.0	Balance	Balance	Balance	Balance	Balance	0.35-1.0
Nickel	0.50	0.50	0.50	0.15	0.50	0.50	0.15	—	—	—	—	—	0.03
Tin	0.35	0.35	0.1-0.15	0.15	0.15	0.15	0.10	0.003	0.003	0.002	0.002	0.002	—
Aluminum	Balance	Balance	Balance	Balance	Balance	Balance	Balance	3.5-4.3	3.5-4.3	8.0-8.8	10.5-11.5	25.0-28.0	6.3-9.7
Lead (max)	—	—	—	—	—	—	0.15	0.005	0.005	0.004	0.004	0.004	—
Cadmium (max)	—	—	—	—	—	—	—	0.004	0.004	0.003	0.003	0.003	—
PROPERTIES													
Tensile Strength (ksi)	47	47	48	45	33	43	50	41	48	54	58	61	34
Yield Strength (ksi)	23	23	24	28	14	21	22	—	—	42	48	53	23
Elongation (% in 2")	3.5	3.5	3.5	5.0	9.0	3.5	5-6	10	7	6-10	4-7	1-3	3
Shear Strength (ksi)	28	28	28	29	19	25	27	31	38	40	42	47	20
Fatigue Strength (ksi)	20	20	20	20	17	19	21	6.9	8.2	15	12	21	14
Specific Gravity	2.75	2.71	2.63	2.57	2.65	2.65	2.67	6.6	6.7	6.3	6.03	5.0	1.8
Lbs. per Cubic Inch	0.098	0.098	0.095	0.093	0.096	0.096	0.099	0.240	0.240	0.227	0.218	0.181	0.066
CHARACTERISTICS													
Machinability	Good	Good	Good	Very Good	Fair	Fair	Good	Excellent	Excellent	Excellent	Good	Good	Excellent
Castability	Excellent	Excellent	Good	Poor	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good
Corrosion Resistance	Fair	Fair	Good	Excellent	Good	Good	Good	Good	Good	Good	Good	Good	Fair
Anti-Soldering	Good	Excellent	Good	Poor	Poor	Excellent	Good	Good	Good	Good	Good	Good	Good
Polishing	Fair	Fair	Fair	Excellent	Poor	Poor	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Anodizing Appearance	Fair	Fair	Fair	Excellent	Good	Poor	Fair	Good	Good	Excellent	Excellent	Fair	Good
Pressure Tightness	Good	Good	Excellent	Poor	Good	Excellent	Good	Good	Good	Good	Excellent	Fair	Good
Bearing Wear	—	—	—	—	—	—	—	—	—	Good	Excellent	Excellent	Fair