

## Mill Grade Alloy Composition Limits

Beck Aluminum Corporation

Alloy:	SI	FE	CU	MN	MG	CR	ZN	TI	Other	Other
	Min:	Min:	Min:	Min:	Min:	Min:	Min:	Min:	Each:	Total:
	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:
<b>1070</b>	0.20%	0.25%	0.04%	0.03%	0.03%		0.04%	0.03%	0.03%	
<b>1100</b>	0.95% SI + FE		0.05%	0.20%	0.05%	0.10%	0.10%	0.05%	0.05%	0.15%
<b>1145</b>	0.45% SI + FE		0.05%	0.05%	0.05%		0.05%	0.03%	0.03%	
<b>1200</b>	1.0% SI + FE		0.05%	0.05%			0.10%	0.05%	0.05%	0.15%
<b>2011*</b>	0.40%	0.70%	6.00%	0.40%	0.20%		0.30%		0.05%	0.15%
<b>2014**</b>	0.50%		3.90%	1.20%	0.80%	0.10%	0.25%	0.15%	0.05%	0.15%
<b>3003</b>	0.60%	0.70%	0.05%	1.00%	0.20%		0.10%		0.05%	0.15%
<b>3004</b>	0.30%	0.70%	0.25%	1.00%	0.80%		0.25%		0.05%	0.15%
<b>3105</b>	0.60%	0.70%	0.30%	0.30%	0.20%	0.20%	0.40%	0.10%	0.05%	0.15%
<b>5042</b>	0.20%	0.35%	0.15%	0.20%	3.00%	0.10%	0.25%	0.10%	0.05%	0.15%
<b>5052</b>	0.25%	0.40%	0.10%	0.10%	2.20%	0.15%	0.280%	0.35%	0.10%	0.05%
<b>5083</b>	0.40%	0.40%	0.10%	0.40%	4.00%	0.05%	0.25%	0.25%	0.15%	0.05%
<b>5083</b>	0.40%	0.40%	0.10%	1.00%	4.90%	0.25%	0.25%	0.15%	0.05%	0.15%

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	Min:	Min:	Min:	Min:	Min:	Min:	Min:	Min:	Each:	Total:
	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:	Max:
<b>5182</b>				0.20%	4.00%					
	0.20%	0.35%	0.15%	0.50%	5.00%	0.10%	0.25%	0.10%	0.05%	0.15%
<b>6061</b>	0.40%		0.15%		0.80%	0.04%				
	0.80%	0.70%	0.40%	0.15%	1.20%	0.35%	0.25%	0.15%	0.05%	0.15%
<b>6063</b>	0.20%				0.45%					
	0.60%	0.35%	0.10%	0.10%	0.90%	0.10%	0.10%	0.10%	0.05%	0.15%
<b>6463</b>	0.20%				0.45%					
	0.60%	0.15%	0.10%	0.10%	0.90%	0.10%	0.10%	0.10%	0.05%	0.15%
<b>7050***</b>			2.00%		1.90%		5.70%			
	0.12%	0.15%	2.60%	0.10%	2.60%	0.04%	6.70%	0.06%	0.05%	0.15%
<b>7075</b>			1.20%		2.10%	0.18%	5.10%			
	0.40%	0.50%	2.00%	0.30%	2.90%	0.28%	6.10%	0.20%	0.05%	0.15%
<b>7175</b>			1.20%		2.10%	0.18%	5.10%			
	0.15%	0.20%	2.00%	0.10%	2.90%	0.28%	6.10%	0.10%	0.05%	0.15%

\*Bi 0.20 to 0.60%, 0.20 to 0.60% Pb

\*\*In the case of extruded and forged products, there may be a Zr + Ti limit of 0.20% maximum

\*\*\*0.08 to 0.15% Zr

**These composition limits are for reference purposes**

**Based on Aluminum Association specifications, January, 2001**