What is claimed is:

1. A metal alloy feedstock for metal injection molding in an injection molding machine having a heated barrel, the heated barrel having a temperature gradient, the feedstock comprising:

a first composition having a first melting point, wherein the first composition is a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc;

a second composition having a second melting point higher than the first melting point of the first composition;

the first melting point and the second melting point matching to the temperature gradient of the heated barrel;

whereby when fed into the injection molding machine the first composition melts prior to the second composition melts and enabling the second composition to solute into the first composition.

2. The metal alloy feedstock of claim 1, wherein the first composition includes about 5wt% to about 15wt% of the feedstock and the second composition includes about 85wt% to about 95wt% of the feedstock.

3. The metal alloy feedstock of claim 1, wherein the first composition includes about 80wt% to about 90wt%.

4. The metal alloy feedstock of claim 1, wherein the first composition and second composition each comprise about 50wt% of the metal alloy feedstock, respectively.

5. The metal alloy feedstock of claim 1, wherein the first composition is a metal alloy comprising about 95% zinc and about 5% aluminum.

6. The metal alloy feedstock of claim 1, wherein the first composition is a metal alloy comprising about 85% zinc and about 15% aluminum.

~~7. The metal alloy feedstock of claim 1, wherein the first composition is a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.~~

8~~7~~. The metal alloy feedstock of claim 1, wherein the second composition is a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.

9~~8~~. The metal alloy feedstock of claim 1, wherein the second composition is a metal alloy comprising about 86wt% aluminum, about 10wt% silicon, and about 4wt% copper.

10~~9~~. The metal alloy feedstock of claim 1, further comprising at least one composition having a melting point greater than the first melting point, but less than the second melting point.

11~~0~~. The metal alloy feedstock of claim 1, further comprising a non-alloying reinforcement material.

12~~1~~. A method of metal injection molding on an injection molding machine having a heated barrel with an increasing temperature gradient, the method comprising:

providing a metal alloy feedstock including a first composition having a first melting point and a second composition having a second melting point that is higher than the first melting point, the first melting point and the second melting point selected to match the temperature gradient of the heated barrel of the injection molding machine;

feeding the metal alloy feedstock into the injection molding machine;

melting the metal alloy feedstock within the heated barrel of the injection molding machine; and

maintaining the percentage of solids to liquids in the metal alloy feedstock of the first composition and second composition within a processable range of about 5% to about 30%.

wherein the first composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.

123. The method of claim 112, wherein the first composition is selected to include about 5wt% to about 15wt% of the feedstock and the second composition is selected to include about 85% to about 95% of the first composition and the second composition mixed together.

134. The method of claim 112, wherein the first composition is selected to include about 80wt% to about 90wt% of the first composition and the second composition mixed together.

145. The method of claim 112, wherein the first composition and second composition are selected to comprise about 50wt% of the first composition and the second composition mixed together.

156. The method of claim 112, wherein the first composition is selected to include a metal alloy comprising about 95% zinc and about 5% aluminum.

167. The method of claim 112, wherein the first composition is selected to include a metal alloy comprising about 85% zinc and about 15% aluminum.

~~18. The method of claim 12, wherein the first composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.~~

179. The method of claim 112, wherein the second composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.

~~20~~18. The method of claim 1~~1~~2, wherein the second composition is selected to include a metal alloy comprising about 86wt% aluminum, about 10wt% silicon, and about 4wt% copper.

~~21~~19. The method of claim 1~~1~~2, further comprising selecting at least one composition having a melting point greater than the first melting point, but less than the second melting point in the metal alloy feedstock.

20~~2~~. The method of claim 1~~1~~2, further comprising feeding a non-alloying reinforcing material into the injection molding machine.

21~~3~~. A method of selecting metal alloys for use in a metal injection molding process, comprising:

selecting a first composition having a first melting point, wherein the first composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc;

selecting a second composition having a second melting point higher than the first melting point; the first melting point and the second melting point selected to match a temperature gradient of a heated barrel of an injection molding machine; and whereby when the first composition and the second composition are processed in the injection molding machine the percentage of solids to liquids of the first composition and second composition remain within a processable range of about 5% to about 30%.

22~~4~~. The method of claim 21~~3~~, wherein the first composition is selected to include about 5wt% to about 15wt% of the feedstock and the second composition is selected to include about 85% to about 95% of the first composition and the second composition mixed together.

235. The method of claim 213, wherein the first composition is selected to include about 80wt% to about 90wt% of the first composition and the second composition mixed together.

246. The method of claim 213, wherein the first composition and second composition are selected to comprise about 50wt% of the first composition and the second composition mixed together.

257. The method of claim 213, wherein the first composition is selected to include a metal alloy comprising about 95% zinc and about 5% aluminum.

268. The method of claim 213, wherein the first composition is selected to include a metal alloy comprising about 85% zinc and about 15% aluminum.

~~29. The method of claim 23, wherein the first composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.~~

3027. The method of claim 213, wherein the second composition is selected to include a metal alloy formed from elements selected from the group consisting of aluminum, copper, silicon and zinc.

3128. The method of claim 213, wherein the second composition is selected to include a metal alloy comprising about 86wt% aluminum, about 10wt% silicon, and about 4wt% copper.

3229. The method of claim 213, further comprising selecting at least one composition having a melting point greater than the first melting point, but less than the second melting point.

303. The method of claim 213, further comprising selecting at least one non-alloying reinforcement material to add to the first composition and the second composition.