Claims

What is claimed:

1. A method for modifying a polymer flow index, comprising:

providing monomers to a polymerization reactor;

providing a chromium catalyst to the polymerization reactor; and

providing an active amount of a flow index modifier to the polymerization reactor, wherein the flow index modifier is carbon dioxide and is from 15.00 parts per million to 50.00 parts per million based upon the monomers and wherein providing the active amount of the flow index modifier forms a polymer having a density that is reduced as compared to a second polymer having a different density, where the second polymer is formed by a same polymerization process, but without utilizing the active amount of the flow index modifier.

2. The method of claim 1, wherein, providing an active amount of the flow index modifier to the polymerization reactor forms a polymer having a polymer flow index that is reduced as compared to a second polymer having a different polymer flow index, where the second polymer is formed by a same polymerization process, but without utilizing an active amount of the flow index modifier.

3. The method of claim 2, wherein, the polymer flow index is reduced from about 5 % to about 50 % as compared to the second polymer.

4. The method of claim 1, wherein the monomers comprise ethylene.

5. The method of claim 1, comprising forming polyethylene.

6. The method of claim 1, wherein the chromium catalyst is a reduced chromium oxide catalyst.