CLAIMS

1. A polyamide composition comprising:
at least one polyamide-6 material; and
a nucleating agent, the nucleating agent comprising at least one organic material and at least first and second inorganic materials.

2. The polyamide composition of claim 1, wherein the organic material comprises a polyamide having a ratio of carbon atoms to amide groups of less than 5:1.

3. The polyamide composition of claim 1, wherein the organic material comprises polyamide-22.

4. The polyamide composition of claim 1, wherein the first or second inorganic material comprises a metal oxide, a silicon dioxide or a derivative or combination thereof.

5. The polyamide composition of claim 1, wherein the first or second inorganic material comprises montmorillonite, bentonite, kaolinite, hectorite or halloysite.

6. The polyamide composition of claim 1, wherein the first inorganic material comprises alumina silicate and the second inorganic material comprises an organically modified montmorillonoid clay.

7. The polyamide composition of claim 1, comprising less than 0.5 wt% nucleating agent.

8. The polyamide composition of claim 1, further comprising at least one polyamide-66 material.

9. The polyamide composition of claim 1, further comprising a lubricant selected from the group consisting of ethylene-bis-stearamide, zinc stearate, magnesium stearate, calcium stearate, sodium stearate, glycerol monostearate, polydimethylsiloxane, polyolefin, and ethylenevinylacetate copolymers and combinations thereof.

10. A polyamide composition comprising:

about 1 to 99 wt.% nucleated polyamide-6 material, the nucleated polyamide-6 material including at least one organic nucleating material and at least first and second inorganic nucleating materials;

about 99 to 1 wt.% polyamide-66 material; and

about 0.001 to about 20 wt.% carbon black.

11. The polyamide composition of claim 10, wherein the polyamide-66 material is present at a concentration ranging from about 50 to 90 wt.% and the nucleated polyamide-6 material is present at a concentration of about 10 to 50 wt.%.

12. The polyamide composition of claim 10, wherein the organic material comprises polyamide-22.

13. The polyamide composition of claim 10, wherein the first or second inorganic material comprises a metal oxide, a silicon dioxide or a derivative or combination thereof.

14. The polyamide composition of claim 10, wherein the first or second inorganic material comprises montmorillonite, bentonite, kaolinite, hectorite or halloysite.

15. The polyamide composition of claim 10, wherein the first inorganic material comprises alumina silicate and the second inorganic material comprises an organically modified montmorillonoid clay.

16. A cable tie produced from the polyamide composition of any of claims 1-15.

CLAIMS

1. A polyamide composition comprising:

at least one polyamide-6 material; and

a nucleating agent, the nucleating agent comprising:

at least one organic material comprising a polyamide having a ratio of carbon atoms to amide groups of less than 5:1;

a first inorganic material selected from a metal oxide and a silicon dioxide, or a derivative or combination thereof; and

a second inorganic material selected from the group consisting of montmorillonite, bentonite, hectorite, and halloysite.

2. The polyamide composition of claim 1, wherein the organic material comprises polyamide-22.

3. The polyamide composition of claim 1, wherein the first inorganic material comprises aluminum oxide.

4. The polyamide composition of claim 1, wherein the second inorganic material comprises organically modified montmorillonoid clay.

5. The polyamide composition of claim 1, wherein the first inorganic material comprises alumina silicate and the second inorganic material comprises an organically modified montmorillonoid clay.

6. The polyamide composition of claim 1, comprising less than 0.5 wt% nucleating agent.

7. The polyamide composition of claim 1, further comprising at least one polyamide-66 material.

8. The polyamide composition of claim 1, further comprising a lubricant selected from the group consisting of ethylene-bis-stearamide, zinc stearate, magnesium stearate, calcium stearate, sodium stearate, glycerol monostearate, polydimethylsiloxane, polyolefin, and ethylenevinylacetate copolymers and combinations thereof.

9. A polyamide composition comprising:

about 1 to 99 wt.% nucleated polyamide-6 material, the nucleated polyamide-6 material including at least one organic material comprising a polyamide having a ratio of carbon atoms to amide groups of less than 5:1; a first inorganic material selected from a metal oxide and a silicon dioxide, or a derivative or combination thereof; and a second inorganic material selected from the group consisting of montmorillonite, bentonite, hectorite, and halloysite;

about 99 to 1 wt.% polyamide-66 material; and

about 0.001 to about 20 wt.% carbon black.

10. The polyamide composition of claim 9, wherein the polyamide-66 material is present at a concentration ranging from about 50 to 90 wt.% and the nucleated polyamide-6 material is present at a concentration of about 10 to 50 wt.%.

11. The polyamide composition of claim 9, wherein the organic material comprises polyamide-22.

12. The polyamide composition of claim 9, wherein the first inorganic material comprises aluminum oxide.

13. The polyamide composition of claim 9, wherein the second inorganic material comprises organically modified montmorillonoid clay.

14. The polyamide composition of claim 9, wherein the first inorganic material comprises alumina silicate and the second inorganic material comprises an organically modified montmorillonoid clay.

15. A cable tie produced from the polyamide composition of any of claims 1-14.