CLAIMS:

Claim 1: A resin composition, comprising:

at least one selected from the group consisting of a polyester resin and a co-polyester resin; and

a carbon black with an average primary particle size in a range of 100 to 160 nanometers.

Claim 2: The composition of claim 1, wherein the carbon black is present in the resin at a concentration of from 1 ppm to 20 ppm by weight of the resin.

Claim 3: The composition of claim 1, wherein the carbon black is present in the resin at a concentration of from 2 ppm to 10 ppm by weight of the resin.

Claim 4: The composition of claim 1, wherein the carbon black is a lamp black carbon black produced by a lamp black process.

Claim 5: The composition of claim 1, wherein the average primary particle size of the carbon black is in a range of from 102 to 150 nm.

Claim 6: The composition of claim 1, wherein the average primary particle size of the carbon black is in a range of from 105 to 145 nm.

Claim 7: The composition of claim 1, wherein the average primary particle size of the carbon black is in a range of from 106 to 130 nm.

Claim 8: The composition of claim 1, wherein the carbon black is present in the resin at a concentration of from 5 ppm to 8 ppm by weight of the resin.

Claim 9: The composition of claim 1, wherein the carbon black is present in the resin at a concentration of from 6.5 to 7.5 ppm by weight of the resin.

Claim 10: The composition of claim 1, wherein the polyester resin is present.

Claim 11: The composition of claim 1, wherein the co-polyester resin is present.

Claim 12: The composition of claim 1, wherein the polyester resin and the co-polyester resin are present.

Claim 13: The composition of claim 1, further comprising:
a further resin.

Claim 14: A method of producing the composition of claim 1, the method comprising:
combining the resin with the carbon black.

Claim 15: The method of claim 10, wherein the resin is in a form of ground resin and the carbon black is in a form of powder, the combining comprises mixing the powder with the ground resin.

Claim 16: The method of claim 10, wherein the combining comprises contacting a dispersion, comprising the carbon black and a liquid, with a prepolymer of the resin during production of the resin.

Claim 17: A method of improving the reheat and color value L* of a preform, the method comprising:
molding the composition of claim 1 into a preform.

Claim 18: A preform, comprising the composition of claim 1.

Claim 19: A bottle or container, comprising the composition of claim 1.

Claim 20: A bottle or container, obtained from the preform of claim 18.

CLAIMS:

1. A preform or bottle made from a resin composition comprising:

(I) A co-polyester resin comprising (i) a dicarboxylic acid component comprising a first dicarboxylic acid and 6 mol% or more of a second dicarboxylic acid, which is different from the first dicarboxylic acid, and (ii) a diol component; and

(II) A carbon black with an average primary particle size in a range of 102 to 160 nanometers, wherein the carbon black is lampblack,
wherein the resin does not comprise an antimony catalyst.

2. The preform or bottle of claim 1, in the form of a preform having a haze of no more than 7%.

3. The preform or bottle of claim 1, in the form of a bottle.

4. The preform or bottle of claim 1, in the form of a preform having an L* value of from 70 to 80.

5. The preform or bottle of claim 1, wherein the carbon black is present in the resin composition at a concentration of from 1 ppm to 20 ppm by weight of the resin composition.

6. The preform or bottle of claim 1, wherein the carbon black is present in the resin composition at a concentration of from 2 ppm to 10 ppm by weight of the resin composition.

7. The preform or bottle of claim 1, wherein the average primary particle size of the carbon black is in a range of from 105 to 145 nm.

8. The preform or bottle of claim 1, wherein the average primary particle size of the carbon black is in a range of from 106 to 130 nm.

9. The preform or bottle of claim 1, wherein the carbon black is present in the resin composition at a concentration of from 5 ppm to 10 ppm by weight of the resin composition.

10. The preform or bottle of claim 1, wherein the carbon black is present in the resin composition at a concentration of from 6.5 to 8 ppm by weight of the resin composition.

11. The preform or bottle of claim 1, wherein first dicarboxylic acid is terephthalic acid and the co-polyester resin comprises from 5 to 30 mol% of isophthalic acid and from 2 to 10 mol% of a naphthalene dicarboxylic acid.

12. The preform or bottle of claim 1, wherein first dicarboxylic acid is terephthalic acid and the co-polyester resin comprises from 5 to 30 mol% of isophthalic acid and from 4 to 8 mol% of a naphthalene dicarboxylic acid.

13. The preform or bottle of claim 1, wherein first dicarboxylic acid is terephthalic acid and the co-polyester resin comprises from 10 to 30 mol% of isophthalic acid.

14. The preform or bottle of claim 1, further comprising:
a further resin, which is not a polyester resin or a co-polyester resin.

15. The preform or bottle of claim 1, wherein first dicarboxylic acid is terephthalic acid and the co-polyester resin comprises from 15 to 28 mol% of isophthalic acid.

16. The preform or bottle of claim 1, wherein first dicarboxylic acid is terephthalic acid and the co-polyester resin comprises from 20 to 25 mol% of isophthalic acid.