Claims

1. A composition comprising:

(i) a polyolefin,

(ii) a fatty acid salt of each of three metals selected from Ce, Mn, Al, and Mg; and

(iii) a polyvinyl alcohol (PVA), preferably a partially hydrolysed PVA.

2. The composition as claimed in 1, wherein said polyolefin is selected from polypropylene and polyethylene, preferably polypropylene.

3. The composition as claimed in any preceding claim, wherein said fatty acid salt is a salt of a fatty acid comprising of 14 to 24 carbon atoms, preferably 16 to 20 carbon atoms, still more preferably 18 carbon atoms, most preferably wherein said fatty acid salt is a salt of stearic acid.

4. The composition as claimed in any preceding claim, further comprising a polyhydric alcohol, preferably a polyhydric alcohol comprising 2 to 24 carbon atoms, more preferably a polyhydric alcohol comprising 2 to 12 carbon atoms, still more preferably a polyhydric alcohol comprising 4 to 6 carbon atoms, most preferably sorbitol.

5. The composition as claimed in claim 4, wherein the weight ratio of said polyhydric alcohol to said PVA is 0.05 : 1 to 4 : 1, preferably 0.08 : 1 to 2 : 1, more preferably 0.10 : 1 to 1.6 : 1, most preferably 0.10 : 1 to 0.35 : 1.

6. The composition as claimed in any preceding claim, further comprising a carboxylic acid, preferably a hydroxy acid, more preferably a hydroxy acid comprising 1 to 12 carbon atoms, still more preferably a hydroxy acid comprising 2 to 10 carbon atoms, most preferably a hydroxy acid comprising 4 to 8 carbon atoms.

7. The composition as claimed in claim 6, wherein the weight ratio of said carboxylic acid to said PVA is 0.02 : 1 to 4 : 1, preferably 0.08 : 1 to 2 : 1, more preferably 0.10 : 1 to 1.6 : 1, most preferably 0.10 : 1 to 0.35 : 1.

8. The composition as claimed in any preceding claim, wherein the weight ratio of fatty acid salts of metals selected from Ce, Mn, Al, Mg, and mixtures thereof to said PVA

is 0.2: 1 to 25: 1, preferably 0.5 : 1 to 10 : 1, more preferably 0.6 : 1 to 1.5 : 1, most preferably 0.6 : 1 to 1.3 : 1.

9. The composition as claimed in any preceding claim, comprising a fatty acid salt of Mn and a fatty acid salt of at least one metal selected from Ce, Al, and Mg, and wherein the weight ratio of each fatty acid salt of Ce, Al and Mg to said fatty acid salt of Mn is 0.1:1 to 0.9:1, preferably 0.4:1 to 0.7:1.

10. The composition as claimed in any preceding claim, wherein said PVA is partially hydrolysed and has a degree of hydrolysis of 40-80%mol, preferably 45-55%mol.

11. The composition as claimed in any preceding claim, further comprising an additive selected from an antioxidant, an acid scavenger, a compatibilizer, a lubricant, and mixtures thereof.

12. The composition as claimed in any preceding claim, comprising a fatty acid salt of each of Ce, Mn, Al, and Mg.

13. A method for preparing a composition according to any preceding claim, comprising mixing:

(i) a polyolefin,

(ii) a fatty acid salt of a metal selected from Ce, Mn, Al, Mg, and mixtures thereof; and

(iii) a polyvinyl alcohol (PVA), preferably a partially hydrolysed PVA.

14. An additive, preferably an additive masterbatch, comprising a composition according to any one of claims 1 to 13.

15. A polymer composition comprising:

(i) an additive, preferably an additive masterbatch, according to claim 14; and

(ii) a polymer base composition.

16. The polymer composition as claimed in claim 15, wherein said polymer base composition is a polyolefin, preferably a polyethylene or a polypropylene, most preferably a polypropylene.

17. The polymer composition as claimed in claim 15 or 16, comprising 0.1 to 20 wt%, preferably 0.1 to 10 wt%, more preferably 0.5 to 5 wt%, most preferably 1 to 3 wt% of said additive, preferably an additive masterbatch, based on the total weight of the polymer composition.

18. The polymer composition as claimed in any one of claims 15 to 17, wherein said polymer composition exhibits a reduction in a flexural modulus (e.g. tested according to method specified in ISO 19069-2 (2016)) of 0 to 10%, preferably 0 to 5%, as compared to the flexural modulus of the same polymer composition lacking an additive according to claim 15, and/or wherein said polymer composition exhibits a reduction in M_w following a 28 days UV aging (e.g. tested according to method specified in BSI PAS 9017:2020) of greater than 90%, more preferably greater than 95%.

19. An article comprising a polymer composition of any one of claims 15 to 18.