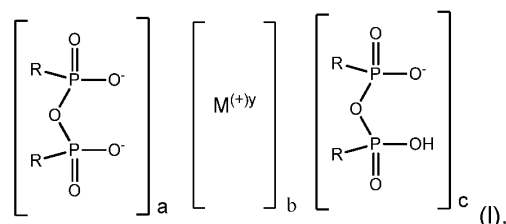


What is claimed is:

1. A flame retardant and stabilizer additive composition, for thermoplastic polymers, comprising

5 (A) at least one phosphorus-containing flame retardant of empirical formula (I):



wherein R is H, an alkyl, aryl, alkylaryl, or arylalkyl group, M is a metal and y

is 2 or 3, such that $\text{M}^{(+y)}$ is a metal cation where (+)y represents the charge

formally assigned to the cation, a, b, and c represent the ratio of the

10 components to which they correspond relative to one another in the compound, and satisfy the charge-balance equation $2(a)+c=b(y)$, and c is not zero, and

(B) at least one epoxide compound.

2. The flame retardant and stabilizer additive composition of claim 1, wherein in the empirical formula (I), a is 0, 1 or 2, b is from 1 to 4 and c is 1 or 2.

3. The flame retardant and stabilizer additive composition of claim 1, wherein y is 3, a is 1, b is 1 and c is 1.

4. The flame retardant and stabilizer additive composition of claim 3, wherein M is chosen from Al, Ga, Sb, Fe, Co, B, and Bi.

20 5. The flame retardant and stabilizer additive composition of claim 4, wherein M is Al or Fe.

6. The flame retardant and stabilizer additive composition of any one of claims 1-5, wherein in the empirical formula (I) R is H, C_{1-12} alkyl, C_{6-10} aryl, C_{7-18} alkylaryl, or C_{7-18} arylalkyl, wherein the alkyl, aryl, alkylaryl, or arylalkyl are unsubstituted or are substituted by

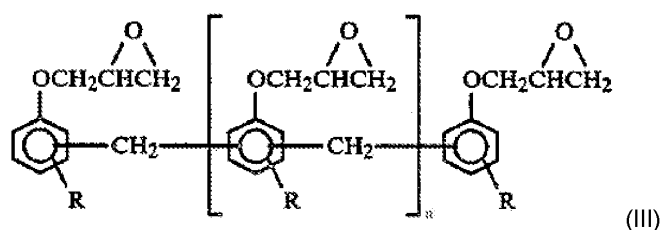
25 halogen, hydroxyl, amino, C_{1-4} alkylamino, di- C_{1-4} alkylamino, C_{1-4} alkoxy, carboxy or C_{2-5} alkoxy carbonyl.

7. The flame retardant and stabilizer additive composition of claim 6, wherein R is unsubstituted C_{1-12} alkyl, C_6 aryl, C_{7-10} alkylaryl, or C_{7-10} arylalkyl.

8. The flame retardant and stabilizer additive composition of claim 6, wherein R is unsubstituted C_{1-6} alkyl.

30 9. The flame retardant and stabilizer additive composition of claim 8, wherein R is chosen from methyl, ethyl, propyl, isopropyl, butyl, and t-butyl.

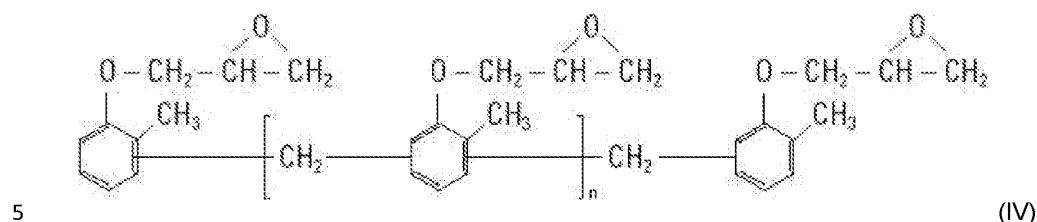
10. The flame retardant and stabilizer additive composition according to any one of claims 1-9, wherein M is Al, y is 3, a is 1, b is 1 and c is 1.
11. The flame retardant and stabilizer additive composition of claim 10, wherein R is H or C₁₋₆ alkyl.
12. The flame retardant and stabilizer additive composition of claim 11, wherein R is chosen from methyl and ethyl.
13. The flame retardant and stabilizer additive composition of claim 1 further comprising (C) at least one flame retardant synergist and/or additional flame retardant.
14. The flame retardant and stabilizer additive composition of claim 13, wherein component (C) comprises a nitrogen-containing flame retardant synergist.
15. The flame retardant and stabilizer additive composition of claim 14, wherein the nitrogen-containing synergist is chosen from melamine, melam, melem, melon, melamine cyanurate, dimelamine phosphate, dimelamine pyrophosphate, melamine phosphate, melamine pyrophosphate, melamine polyphosphate, melam polyphosphate, melon polyphosphate, melem polyphosphate, and mixed polysalts thereof.
16. The flame retardant and stabilizer additive composition of claim 1, wherein the at least one epoxide compound has at least two epoxide groups.
17. The flame retardant and stabilizer additive composition of claim 16, wherein the epoxide compound is a polyglycidyl or poly(beta-methylglycidyl) ether.
18. The flame retardant and stabilizer additive composition of claim 16, wherein the epoxide compound is derived from a phenolic novolac.
19. The flame retardant and stabilizer additive composition of claim 18, wherein the phenolic novolac is chosen from cresol novolacs, bisphenol A novolacs, and bisphenol F novolacs.
20. The flame retardant and stabilizer additive composition of claim 16, wherein the epoxide compound is a phenolic novolac polyglycidyl ether.
21. The flame retardant and stabilizer additive composition of claim 20, wherein the phenolic novolac polyglycidyl ether is of the formula (III):



- where R in formula (III) is independently chosen from the group consisting of hydrogen, halogen, alkyl, alkoxy, aryl, alkylaryl and aralkyl, and n is 0 to 1000.

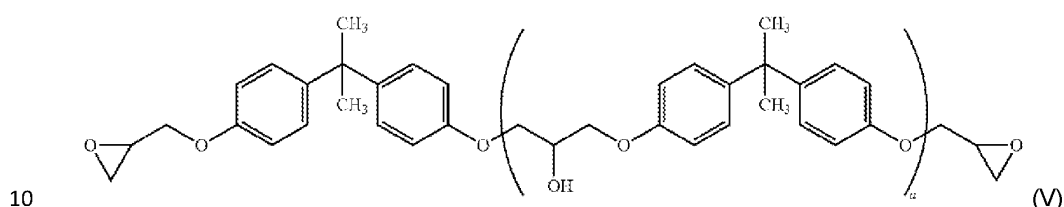
22. The flame retardant and stabilizer additive composition of claim 21, wherein R in formula (III) is C₁-C₄ alkyl.

23. The flame retardant and stabilizer additive composition of claim 20, wherein the epoxide compound is a polyglycidyl ether of cresol novolac of the formula (IV):



where n is from 0 to 100 and represents the average number.

24. The flame retardant and stabilizer additive composition of claim 17, wherein the epoxide compound is an oligomeric reaction product of bisphenol A with epichlorohydrin of formula (V):



where a is from 0 to 100 and represents the average number.

25. The flame retardant and stabilizer additive composition of claim 1, further comprising (D) one or more other stabilizers.

26. The flame retardant and stabilizer additive composition of claim 25, wherein the one or more other stabilizers are chosen from zinc borate, zinc stannate, zinc molybdate complex, zinc molybdate/magnesium hydroxide complex, zinc molybdate/magnesium silicate complex, calcium molybdate/zinc complex, and zinc phosphate complex, polysiloxane, montmorillonite, kaolinite, halloysite, and hydrotalcite.

27. A flame retardant thermoplastic composition comprising at least one thermoplastic polymer and the flame retardant and stabilizer additive composition according to any one of claims 1-26.

28. The flame retardant thermoplastic composition of claim 27, wherein the at least one thermoplastic polymer is chosen from the group consisting of polyesters and polyamides.

29. The flame retardant thermoplastic composition of claim 28, wherein the at least one thermoplastic polymer is a polyamide chosen from the group consisting of polyamide-4,6, polyamide-6, polyamide-6,6, polyamide-6,10, polyamide-6,12, polyamide-11, polyamide-12, polyamide-4,T, polyamide-MXD,6, polyamide-12,T, polyamide-10,T, polyamide-9,T,

polyamide-6,T/6,6, polyamide-6,T/D,T, polyamide-6,6/6,T/6,I, polyamide-6/6,T, polyamide-6,T/6,I, and mixtures thereof.

30. The flame retardant thermoplastic composition of claim 27, further comprising at least one inorganic filler.
- 5 31. The flame retardant thermoplastic composition of claim 30, wherein the inorganic filler comprises glass fiber.