

WHAT IS CLAIMED IS

Claim 1. A polymeric composition comprising:
from about 40 to about 99 weight percent of a first polymer; and
from about 1 to about 60 weight percent of polybutylene(succinate-co-adipate)
("PBSA").

Claim 2. The polymeric composition of Claim 1, wherein the first polymer is selected from the group consisting of polyvinyl chloride, polylactic acid, polyhydroxy alkanoates, and mixtures thereof.

Claim 3. The polymeric composition of Claim 1, wherein the PBSA has a weight average molecular weight from about 50,000 to about 200,000.

Claim 4. The polymeric composition of Claim 1, wherein the PBSA has a weight average molecular weight from about 80,000 to about 120,000.

Claim 5. The polymeric composition of Claim 1, wherein the PBSA has a viscosity from about 15,000 to about 40,000 centipoise at a temperature of about 215 °C.

Claim 6. The polymeric composition of Claim 1, wherein the PBSA has a melting point from about 20 °C to about 75 °C.

Claim 7. The polymeric composition of Claim 1, wherein the PBSA has a melting point from about 25 °C to about 40 °C.

Claim 8. The polymeric composition of Claim 1, wherein the PBSA comprises:
from about 40 to about 60 mole percent moieties derived from 1,4-butanediol,
from about 10 to about 50 mole percent moieties derived from succinic acid, and
from about 10 to about 50 mole percent moieties derived from adipic acid.

Claim 9. The polymeric composition of Claim 1, wherein the composition comprises from about 1 to about 10 weight percent of the PBSA.

Claim 10. The polymeric composition of Claim 1, wherein the composition comprises from about 50 to about 60 weight percent of the PBSA.

Claim 11. The polymeric composition of Claim 1, wherein the composition further comprises at least one additive selected from the group consisting of fillers, pigments, stabilizers, co-stabilizers, secondary plasticizers, lubricants, impact modifiers, and viscosity reducers.

Claim 12. A method for making a polymeric composition, comprising the steps of:
reacting 1,4-butanediol with succinic acid and adipic acid to form a pre-polymer;
polymerizing the pre-polymer in a condensation polymerization reaction to form polybutylene(succinate-co-adipate) ("PBSA"); and

blending a first polymer with the PBSA to form a polymeric composition, wherein the polymeric composition comprises from about 40 to about 99 weight percent of the first polymer; and from about 1 to about 60 weight percent of the PBSA.

Claim 13. The method of Claim 12, wherein the first polymer is selected from the group consisting of polyvinyl chloride, polylactic acid, polyhydroxy alkanoates, and mixtures thereof.

Claim 14. The method of Claim 12, wherein the PBSA has a weight average molecular weight from about 50,000 to about 200,000.

Claim 15. The method of Claim 12, wherein the PBSA has a weight average molecular weight from about 80,000 to about 120,000.

Claim 16. The method of Claim 12, wherein the PBSA has a viscosity from about 15,000 to about 40,000 centipoise at a temperature of about 215 °C.

Claim 17. The method of Claim 12, wherein the PBSA has a melting point from about 20 °C to about 75 °C.

Claim 18. The method of Claim 12, wherein the PBSA has a melting point from about 25 °C to about 40 °C.

Claim 19. The method of Claim 12, wherein the PBSA comprises:

from about 40 to about 60 mole percent moieties derived from 1,4-butanediol,
from about 10 to about 50 mole percent moieties derived from succinic acid, and
from about 10 to about 50 mole percent moieties derived from adipic acid.

Claim 20. The method of Claim 12, wherein the composition comprises from about 1 to about 10 weight percent of the PBSA.

Claim 21. The method of Claim 12, wherein the composition comprises from about 50 to about 60 weight percent of the PBSA.

Claim 22. The method of Claim 12, wherein the polymerization of the pre-polymer to form PBSA is carried out using a metal oxide or an organometal oxide catalyst, wherein the

metal in the metal oxide or organometal oxide catalyst is selected from the group consisting of titanium, zirconium, tin, germanium, antimony, hafnium, and bismuth.

Claim 23. The method of Claim 12, wherein the polymerization of the pre-polymer to form PBSA is carried out using a catalyst selected from the group consisting of titanium isopropoxide, zirconium butoxide, and mixtures thereof.