Claims

[Claim 1] A polymer composition comprising an amorphous polyhydroxyalkanoate (PHA) and a polyurethane, wherein the amorphous PHA has a crystallinity of less than 5% by weight.

[Claim 2] The polymer composition according to claim 1, wherein the polyurethane comprises a thermoplastic polyurethane.

[Claim 3] The polymer composition according to claim 1 or 2, wherein the polyurethane comprises a polyether or polyester thermoplastic polyurethane.

[Claim 4] The polymer composition according to any one of the preceding claims, wherein the polyurethane has a tensile strength measured accordance with ASTM D-412 of 10 MPa or more and 60 MPa or less, and/or the polyurethane has a shore D hardness A measured accordance with ASTM D-2240 of 30 or more and 90 or less.

[Claim 5] The polymer composition according to any one of the preceding claims, wherein the polymer composition has the polyurethane in a content from 55 to 99 wt%.

[Claim 6] The polymer composition according to any one of the preceding claims, wherein the amorphous PHA comprises a copolymer including 4-hydroxybutyrate (4-HB).

[Claim 7] The polymer composition according to any one of the preceding claims, wherein the amorphous PHA has a 4-HB content in a range from 25 to 45%.

[Claim 8] The polymer composition according to any one of the preceding claims, wherein the amorphous PHA comprises a copolymer of 3-hydroxybutyrate (3-HB), and at least one selected from the group consisting of 4-hydroxybutyrate (4-HB), 3-hydroxypropionate (3-HP), 3-hydroxyhexanoate (3-HH), 3-hydroxyoctanoate (3-HO) and 3-hydroxy valerate (3-HV).

[Claim 9] The polymer composition according to any one of the preceding claims, wherein the polymer composition has a biobased carbon content of at least 1% as measured using ASTM D6866.

[Claim 10] The polymer composition according to any one of the preceding claims, wherein the amorphous PHA has a biobased carbon content of at least 90% as measured using ASTM D6866.

[Claim 11] The polymer composition according to any one of the preceding claims, wherein the polymer composition is an article made by injection molding, extrusion, thermoforming, compression molding, blow molding, blown/cast/oriented film, or a combination thereof.

[Claim 12] The polymer composition according to any one of the preceding claims, wherein a tensile modulus of the polymer composition is less than 800 MPa.

[Claim 13] An adhesive material comprising the polymer composition according to any one of the preceding claims.

[Claim 14] A method of reducing a tensile modulus and a shore D hardness of a polymer composition comprising polyurethane, the method comprising

adding an amorphous PHA to a polyurethane thereby producing the composition according to any one of claims 1-12.

[Claim 15] A method of increasing a tear resistance of a polymer composition comprising polyurethane, the method comprising adding an amorphous PHA to a polyurethane thereby producing the composition according to any one of claims 1-12.