

CLAIMS

1. An elastomeric composition comprising, per 100 parts by weight of rubber (phr):
about 0 to about 25 phr of polybutadiene having a cis-1,4 linkage content of at least 95%;
5 about 75 to 100 phr of a styrene/butadiene copolymer;
about 10 to about 30 phr of a processing oil;
about 50 to about 70 phr of a filler;
a curative agent;
an antioxidant;
10 a silane coupling agent; and
about 5 to about 40 phr of a propylene-ethylene-diene terpolymer.
2. The elastomeric composition of claim 1, wherein the elastomeric composition has a glass transition temperature of between -25°C and 0°C.
- 15 3. The elastomeric composition of claim 1, wherein the filler is a silica-based filler.
4. The elastomeric composition of claim 1, wherein the filler is a carbon black filler.
- 20 5. The elastomeric composition of claim 1, wherein the filler is blend of a silica-based filler and a carbon black filler.
6. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-diene terpolymer is present in the amount of about 5 phr to about 25 phr.
- 25 7. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-diene terpolymer is present in the amount of about 10 phr to about 20 phr.
8. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-diene terpolymer contains from about 1 wt% to about 8 wt% ethylidene norbornene based on the terpolymer.
- 30 9. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-

diene terpolymer contains from about 2 wt% to about 6 wt% ethylidene norbornene based on the terpolymer.

10. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
5 diene terpolymer contains from about 3 wt% to about 5 wt% ethylidene norbornene based on the terpolymer.

11. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
10 diene terpolymer contains from about 5 wt% to about 25 wt% ethylene based on the terpolymer.

12. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
diene terpolymer contains from about 8 wt% to about 12 wt% ethylene based on the terpolymer.

13. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
15 diene terpolymer contains from about 72 wt% to about 95 wt% propylene based on the terpolymer.

14. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
20 diene terpolymer contains from about 80 wt% to about 93 wt% propylene based on the terpolymer.

15. The elastomeric composition of any preceding claim, wherein the propylene-ethylene-
25 diene terpolymer contains from about 85 wt% to about 89 wt% propylene based on the terpolymer.

16. The elastomeric composition of any preceding claim, wherein the glass transition
temperature (T_g) of the propylene-ethylene-diene terpolymer is from about 20°C to about -
60°C.

30 17. The elastomeric composition of any preceding claim, wherein the melt flow rate (MFR)
at 2.16 kg weight at 230°C of the propylene-ethylene-diene terpolymer is from about 0.1 to
about 15 g/10 min.

18. A tire tread composition comprising the elastomeric composition of any preceding claim.
19. An article comprising the tire tread composition of claim 18.
- 5 20. A method of making the elastomeric composition of claims 1-17, comprising the steps of:
- (a) blending polybutadiene, the styrene/butadiene copolymer, the filler, the processing oil, and the propylene-ethylene-diene terpolymer to form a first component at a temperature in
- 10 the range from about 110°C to about 200°C;
- (b) blending the curative agent with the first component at a temperature in the range of about less than 110°C; and
- (c) recovering the elastomeric composition.
- 15 21. A method of balancing the wet traction performance and rolling resistance in a tire tread comprising the elastomeric composition of claims 1-17:
- combining the filler, polybutadiene, the styrene/butadiene copolymer, and the curative agent with one or more of the propylene-ethylene-diene terpolymer to form the tire tread; and
- 20 effecting a cure of the components to form a tire tread,
- wherein the level of the propylene-ethylene-diene terpolymer(s) relative to the other components, and its comonomer content, can be varied to improve the balance of wet traction and rolling resistance of a tire tread.