

Claims

1. A preform comprising
 - a) a fibrous substrate and
 - b) a multi stage polymer,wherein the quantity of multi stage polymer is between 3wt% and 50wt% of the preform.
2. The preform according to claim 1 characterized that the quantity of multi stage polymer is between 4wt% and 40wt%.
3. The preform according to claim 1 or 2 characterized that the quantity of multi stage polymer is between 5wt% and 30wt%.
4. The preform according to claim 1 or 2 characterized that the quantity of multi stage polymer is between 5wt% and 30wt%.
5. The preform according to claim 1 or 2 characterized that the quantity of multi stage polymer is at least 7wt%, based on the sum of the two compounds a) and b).
6. The preform according to claim 1 or 2 characterized that the quantity of multi stage polymer is between 7wt% and 25wt% , based on the sum of the two compounds a) and b).
7. The preform according to any of claims 1 to 6 characterized that the multistage polymer is preferably in form of spherical polymer particles having a weight average particle size between 20nm and 800nm.
8. The preform according to any of claims 1 to 7 characterized that the multi stage polymer comprises
 - a) one stage (A) comprising a polymer (A1) having a glass transition temperature of less than 0°C
 - b), one stage (B) comprising a polymer (B1) having a glass transition temperature of at least 30°C.

9. The preform according to claims 8 characterized that the polymers (A1) and (B1) are acrylic or methacrylic polymers.
10. The preform according to claim 8 characterized that the
5 polymer (A1) is a silicone rubber based polymer
11. The preform according to claim 8 characterized that the polymers (A1) comprises at least 50wt% of polymeric units coming from isoprene or butadiene.
- 10 12. The preform according to any of claims 8 to 11 characterized that the stage (A) is the first stage and that stage (B) comprising polymer (B1) is grafted on stage (A) comprising polymer (A1).
- 15 13. The preform according to any of claims 1 to 12 characterized that the fibrous substrate comprises fibers having an aspect ratio of at least 1000.
- 20 14. The preform according to any of claims 1 to 13 characterized the fibrous substrate is chosen from stacked or folded fibrous mats or non-woven reinforcements or bundles of fibers or mixtures thereof.
- 25 15. A process for manufacturing the preform according to any of claims 1 to 14, said process comprising the steps of
- a) bringing into contact a fibrous substrate and an aqueous dispersion of a multistage polymer
- b) drying the product of step a),
- 30 c) heating the dried product of b).
16. The process according to claim 15 characterized that step b) is made by heating to at least 45°C.
- 35 17. The process according to claim 15 characterized that step c) is made in a mold at a temperature between 100°C and 250°C.

18. Use of the preform according to any of claims 1 to 14 for manufacturing a polymeric composite material or mechanical or structured parts or articles comprising the polymeric composite material.

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19. Use of the preform made by the process according to any of claims 15 to 17 for manufacturing a polymeric composite material or mechanical or structured parts or articles comprising the polymeric composite material

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