

CLAIMS

1. An absorbent material, the absorbent material comprising:

a matrix formed from a fibrous material and one or more polymerised binder reagents.
2. An absorbent material according to claim 1, wherein the absorbent material comprises 0.05 – 5 dry weight% polymerised binder reagents.
3. An absorbent material according to claim 1 or claim 2, wherein the absorbent material comprises a polymerisation activator.
4. An absorbent material according to claim 3, wherein the absorbent material comprises 0.005 - 0.5 dry weight% polymerisation activator.
5. An absorbent material according to any one of the preceding claims, wherein the fibrous material comprises cellulosic fibres.
6. An absorbent material according to any one of the preceding claims, wherein the fibrous material comprises synthetic fibres.
7. An absorbent material according to any one of the preceding claims, wherein the absorbent material comprises 10 – 99.5 weight% fibrous material.
8. An absorbent material according to any one of the preceding claims, wherein the absorbent material comprises 30 – 60 weight% fibrous material.
9. An absorbent material according to any one of the preceding claims, wherein the absorbent material comprises a reinforcing filler.
10. An absorbent material according to claim 9, wherein the reinforcing filler is a solid particulate material.
11. An absorbent material according to claim 9 or 10, wherein the absorbent material comprises 40 - 70 dry weight% reinforcing fillers.

12. An absorbent material according to any one of the preceding claims, wherein the adsorbent material comprises active adsorption agents.
13. An absorbent material according to any one of the previous claims, wherein the absorbent material is formed into agglomerates.
14. An absorbent material according to any one of the previous claims, wherein the absorbent material is formed into pellets.
15. A method for producing an absorbent material, the method comprising the steps of:
- combining a feedstock comprising fibrous material with one or more binder reagents; and
 - introducing the feedstock into an agglomeration apparatus in the presence of a polymerisation activator to produce the absorbent material.
16. A method according to claim 15, wherein the binder reagents are selected from one or more of styrene monomer compounds, vinyl monomer compounds or silicon monomer compounds.
17. A method according to any one of claims 15 or 16, wherein the agglomeration mixture comprises between 10 – 99.5 weight% fibrous material.
18. A method of absorbing a liquid, the method comprising the step of contacting the liquid with the absorbent material of claims 1 to 14 to absorb at least a portion of the liquid into the absorbent material to produce a loaded absorbent material
19. A method according to claims 18, wherein at least a portion of entrained particles or dissolved substances within the liquid will be absorbed by the absorbent material
20. A method according to any one of claims 18 or 19, wherein the loaded absorbent material may be directed to one or more treatment steps.
21. A method according to any one of claims 18 to 20, wherein the loaded absorbent material is subjected to a drying step.

22.A method according to any one of claims 16 to 19, wherein the loaded absorbent material may be directed to disposal.

23.A method according to claim 20, wherein the loaded absorbent material is be subjected to a high temperature treatment step to destroy combustible materials