Claims

1. A nonwoven fabric comprising
at least one polymer comprising a polyester, and
at least one filler comprising calcium carbonate,
wherein the calcium carbonate is present in the nonwoven fabric in an amount from 0.1 to 50 wt.-%, based on the total weight of the nonwoven fabric, and wherein the nonwoven fabric comprises the at least one polymer and the at least one filler in form of fibers and/or filaments having a diameter from 0.5 to 40 μm, and
wherein the polyester is a polyethylene terephthalate, and the calcium carbonate has an average particle size d_{50} from 1.2 to 1.8 μm, and a top cut particle size d_{98} from 4 to 7 μm.

2. The nonwoven fabric of claim 1, wherein the polyester has a number average molecular weight from 5000 to 100000 g/mol, preferably from 10000 to 50000 g/mol, and more preferably from 15000 to 20000 g/mol.

3. The nonwoven fabric of any one of the foregoing claims, wherein the calcium carbonate is ground calcium carbonate, precipitated calcium carbonate, modified calcium carbonate, surface-treated calcium carbonate, or a mixture thereof, preferably surface-treated calcium carbonate.

4. The nonwoven fabric of any one of the foregoing claims, wherein the calcium carbonate has an top cut particle size d_{98} from 6 to 7 μm.

5. The nonwoven fabric of any one of the foregoing claims, wherein the calcium carbonate is present in the nonwoven fabric in an amount from 0. 2 to 40 wt.-%, and preferably from 1 to 35 wt.-%, based on the total weight of the nonwoven fabric.

6. A process for producing a nonwoven fabric comprising the steps of

    a) providing a mixture of at least one polymer comprising a polyester and at least one filler comprising calcium carbonate,
    b) forming the mixture into fibers and/or filaments having a diameter from 0.5 to 40 μm, and
    c) forming a nonwoven fabric from the fibers and/or filaments, wherein the calcium carbonate is present in the nonwoven fabric in an amount from 0.1 to 50 wt.-%, based on the total weight of the nonwoven fabric,

    wherein the polyester is a polyethylene terephthalate, and the calcium carbonate has an average particle size d_{50} from 1.2 to 1.8 μm, and a top cut particle size d_{98} from 4 to 7 μm.

7. The process of claim 6, wherein in step b) the mixture is formed into fibers, preferably by an extrusion process, and more preferably by a melt blown process, a spunbond process, or a combination thereof.

8. The process of claim 7, wherein the nonwoven fabric is formed by collecting the fibers on a surface or carrier.

9. The process of any one of claims 6 to 8, wherein steps b) and c) are repeated two or more times to produce a multilayer nonwoven fabric, preferably a spundbonded-meltblown-spunbonded (SMS), a meltblown-spunbonded-meltblown (MSM), a spundbonded-meltblown-spunbonded-meltblown (SMSM), a meltblown-spunbonded-meltblown-spunbonded (MSMS), a spundbonded-meltblown-meltblown-spunbonded (SMMS), or a meltblown-spunbonded-spunbonded-meltblown (MSSM) nonwoven fabric.

10. Use of calcium carbonate as filler in a nonwoven fabric comprising at least one polymer comprising a polyester, wherein the calcium carbonate is present in the nonwoven fabric in an amount from 0.1 to 50 wt.-%, based on the total weight of the nonwoven fabric, and wherein the nonwoven fabric comprises the at least one polymer and the

at least one filler in form of fibers and/or filaments having a diameter from 0.5 to 40 μm, and
wherein the polyester is a polyethylene terephthalate, and the calcium carbonate has an average particle size d_{50} from 1.2 to 1.8 μm, and a top cut particle size d_{98} from 4 to 7 μm.

11. Use of fibers for the manufacture of a non-woven fabric, wherein the fibers comprise at least one polymer comprising a polyester and at least one filler comprising calcium carbonate, and
wherein the polyester is a polyethylene terephthalate, and the calcium carbonate has an average particle size d_{50} from 1.2 to 1.8 μm, and a top cut particle size d_{98} from 4 to 7 μm.

12. Use of a nonwoven fabric according to any one of claims 1 to 5 in construction products, waterproofing, thermal insulation, soundproofing, roofing, consumer apparel, upholstery and clothing industries, industrial apparel, medical products, home furnishings, protective products, packaging materials, cosmetic products, hygiene products, or filtration materials.

13. An article comprising the nonwoven fabric according to any one of claims 1 to 5, wherein said article is selected from construction products, consumer apparel, industrial apparel, medical products, home furnishings, protective products, packaging materials, cosmetic products, hygiene products, or filtration materials.