Claims

1. A process for reducing the volatile organic compound content of plastomer having

   - a density of equal to or lower than 883 kg/m^3 (ISO 1183-1:2004 Method A on compression moulded specimen prepared according to EN ISO 1872-2; Feb 2007) and
   - a MFR_2 of 100.0 g/10 min or lower (ISO 1133 at 2.16 kg load and 190 °C);

   to below 65 ppm(VOC, VDA277), the process comprising the steps of

   a) providing raw plastomer in granular form, the raw plastomer having
      - a density of equal to or lower than 883 kg/m^3; and
      - a MFR_2 of 100.0 g/10 min or lower (ISO 1133 at 2.16 kg load and 190 °C); and
      - a volatile organic compound content (VOC, VDA277) of above 150 ppm, and
      - the granules having an average D50 diameter of 2.5 to 4.5 mm measured by image analysis
   b) subjecting said granular raw plastomer to at least one intensive hydrodynamic regime, wherein the hydrodynamic regime is selected from fluidized bed regime, slugging bed regime and double cone regime,

      wherein the superficial gas flow velocity is higher than the minimum fluidization velocity and

      at a minimum temperature of at least 20 °C and a maximum temperature of 4 °C below the Vicat temperature (10 N, ISO 306) of the granular raw plastomer or 35 °C, whatever value is lower, with the temperature measured at the gas inlet to the

fast-fluidization regime,

c) recovering the granular plastomer.

2. The process according to claim 1, wherein the raw plastomer is produced in a solution polymerization process.

3. The process according to claim 1 or 2, wherein the plastomer is a copolymer of ethylene and 1-octene.

4. The process according to any one of the preceding claims, wherein in the slugging bed regime the superficial gas velocity is at least 60 cm/s and in the double cone regime the superficial gas velocity is at least 90 cm/s.

5. The process according to any one of the preceding claims, wherein the superficial gas velocity is at least 40 cm/s.

6. The process according to any one of the preceding claims, wherein the gas used in the fast-fluidization regime is selected from the group of nitrogen, air and mixtures thereof.

7. The process according to any one of the preceding claims wherein the treatment vessel is an insulated treatment vessel.

8. The process according to any one of the preceding claims, whereby the raw plastomer in granular form is preheated.

9. The process according to any one of the preceding claims, wherein the entrainment from the intensive hydrodynamic regime is minimized by use of at least one gas-solid separator.

10. The process according to any one of the preceding claims wherein the plastomer has a density of equal or lower than 870 kg/m³ (ISO 1183-1:2004 Method A on compression moulded specimen prepared according to EN ISO 1872-2; Feb 2007).

11. The process according to any one of the preceding claims, wherein the raw plastomer is produced in a solution polymerization process, the process further comprising

    (i) subjecting the polymer slurry as directed obtained from the solution polymerization reactor into a first separation stage using at least one flash separation yielding a first intermediate polymer;

    (ii) subjecting the first intermediate polymer into an extruder to form the granular raw plastomer, with the granules of the raw plastomer having an average D50 diameter of 2.5 to 4.5 mm measued by image analysis.

12. The process according to any one of the preceding claims, wherein the granules of the raw plastomer and/or the granules of the plastomer as recovered from the at least one intensive hydrodynamic regime are subjected to purge column and/or steam dryer.

13. Use of a process according to any one of claims 1 to 12 for homogenizing volatile concentration within the granules obtained.

14. Use of a process according to any one of claims 1 to 12 for minimizing treatment time when reducing the volatile organic compound content of raw plastomer having a volatile organic

compound content (VOC, VDA277) of above 150 ppm, to below 65 ppm(VOC, VDA277) for the resulting plastomer.