

CLAIMS

What is claimed is –

1. A method of recycling a plastic waste comprising:

5 (a) feeding a quantity of PET-containing dry fines from said plastic waste to a chemical recycling facility; and

(b) depolymerizing in said chemical recycling facility at least a portion of said PET-containing dry fines.

10 2. The method of claim 1, wherein said quantity of PET-containing dry fines comprises at least 90 weight percent PET on a dry basis.

3. The method of claim 1, wherein said quantity of PET-containing dry fines comprises at least 0.1 weight percent co-polyesters on a dry basis.

15 4. The method of claim 1, wherein said quantity of PET-containing dry fines comprises not more than 50 weight percent polyolefins on a dry basis.

5. The method of claim 1, wherein said quantity of PET-containing dry fines comprises not more than 20 weight percent PVC on a dry basis.

20 6. The method of claim 1, wherein said dry fines are recovered from a solid-liquid separator and/or dust collector in a PET reclaimer facility and/or a manufacturer of PET articles, in which dust is generated from conveying, drying, densification, centrifugation processes, and/or grinding PET-containing plastic material.

7. The method of claim 6, wherein said dry fines comprise dust formed during a PET reclaimer densification, extrusion, and/or packaging process.

30 8. The method of any one of claims 1 to 7, wherein said dry fines are fed directly to said chemical recycling facility by a conveyance system interconnecting said chemical recycling facility to a PET reclaimer facility.

5 9. The method of any one of claims 1 to 7, further comprising densifying said dry fines within said chemical recycling facility to form densified plastic particles having a D90 particle size of 0.32 cm (1/8 inches) to 2.54 cm (1 inch) before said depolymerizing (b).

 10. The method of claim 9, further comprising feeding said densified plastic particles into a solvolysis facility within said chemical recycling facility.

10 11. The method of any one of claims 1 to 7, further comprising feeding said dry fines through a screener and separating at least a portion of said dry fines having a D90 of less than 1,000 μm .

15 12. The method of claim 11, further comprising densifying said portion of dry fines having a D90 of less than 1,000 μm to form densified plastic particles have a D90 particle size of 0.32 cm (1/8 inches) to 2.54 cm (1 inch)

 13. The use of PET-containing dry fines as a feedstock to a chemical recycling facility.
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