

Abstract

The invention comprises a process for the recycling and production of plastics, plastics mixtures and plastics materials, using new, reprocessed or used plastics and plastics mixtures or sorted and unsorted plastics wastes, in which a) a supporting material A, which comprises a newly produced plastics material or plastics waste material containing a uniform type-pure plastic or plastics of various types, a material of any or unknown composition X and an additional component Z selected from fatty acids, mixtures containing fatty acid of natural or synthetic origin, fatty acid derivatives which release fatty acid under the process conditions and fatty alcohols are mixed together, A and X together containing, relative to the volume, at least a quantity of plastics such that the non-plastics components are incorporated therein while a homogeneous or partially homogeneous composition is still forming, b) this mixture is conveyed through a conveying device with constant mechanical mixing, kneading or compression, and is subjected along the transport path to a sectional multistage thermal treatment, the temperatures in the various stages lying in each case independently of one another in a range from 60°C to 400°C, and c) the thermally treated mixture is discharged via a nozzle for further treatment or for shaping.