



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 39827.1-2021

**Plastics - Post-consumer poly(ethylene terephthalate) (PET)
bottle recyclates - Part 1: Designation system and basis for
specifications**

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1.1 This Part of GB/T 39827 specifies the designation system and basis for
specifications for post-consumer poly (ethylene terephthalate) (PET) bottle recyclates.

1.2 PET bottle recyclates are differentiated by the ranges (sizes) of the following
recyclate properties:

- a) intrinsic viscosity (IV);
- b) levels of contamination due to labels and other visible contaminants, polyvinyl chloride (PVC) and polyolefins (including adhesives);
- c) water content;
- d) bulk density.

Information such as intended application, processing methods will also assist in classification.

1.3 This Part applies to all PET bottle recyclates.

Note: It applies to materials that are normally used in the form of powder, flakes or pellets.

1.4 The same designation of materials does not imply the same properties. This Part

does not provide data or engineering data to describe the processing conditions required for the material's particular application and/or processing method.

When necessary, such additional information can be determined according to the test method specified in GB/T 39827.2-2021.

1.5 Additional requirements may be given in data block 5 (as shown in 3.1) in

order to

describe the special application of a thermoplastic material or to ensure repeatable processing.

-- Data block 3: Position 1: Intended use and/or processing method information (see 3.4).

Position 2: Food packaging information (see 3.4).

Position 3: Whether colored or not (see 3.4).

-- Data block 4: Designatory properties (see 3.5).

-- Data block 5: Additional information added for classification purposes.

-- The first character of data block 1 shall be a hyphen; the data blocks shall be separated from each other by a comma.

The data block, if not used, shall be separated by two commas (,,).

3.2 Data block 1

3.2.1 General In this data block, poly(ethylene terephthalate) is identified by the symbol "PET" after the hyphen in accordance with ISO 1043-1. Then, in position 2 to position 5 (see 3.2.2 ~ 3.2.5), recycling method, product form and other information are given; the letter code and number code used are shown in Table 1.

3.2.2 Recycling method In position 2 of this data block, the recycling method is represented by the letter code in parentheses, as follows:

-- (MRG), mechanical recycling as defined in ISO 15270;

-- (MRA), mechanical recycling, plus alkali treatment;

-- (MRP), mechanical recycling, plus treatment method other than alkali treatment, such as: solid-phase polymerization or vacuum evaporation.

3.2.3 Product form In position 3 of this data block, the form of the material is represented by F, P, or W.

3.2.4 Size of flakes or pellets in the product In position 4 of this data block, the size of flakes or pellets in the product is represented by S, M or L.

3.2.5 Filter aperture