

butanediol such that the finished elastomer has a number average molecular weight between 20,000 and 30,000.

(b) Optional adjuvant substances employed in the production of the polyester elastomers or added thereto to impart desired technical or physical properties may include the following substances:

List of substances	Limitations
4,4' - Bis ( <i>alpha</i> , <i>alpha</i> -dimethyl-benzyl) diphenylamine.	For use only as an antioxidant.
Tetrabutyl titanate .....	For use only as a catalyst.

(c) An appropriate sample of the finished polyester elastomer in the form in which it contacts food when subjected to ASTM method D968-81, "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Falling Abrasive Tester," which is incorporated by reference (Copies may be obtained from the American Society for Testing Materials, 100 Barr Harbor Dr., West Conshohocken, Philadelphia, PA 19428-2959, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html)), using No. 50 emery abrasive in lieu of Ottawa sand, shall exhibit an abrasion coefficient of not less than 100 liters per mil of thickness.

[42 FR 14572, Mar. 15, 1977, as amended at 49 FR 10109, Mar. 19, 1984]

**§ 177.1595 Polyetherimide resin.**

The polyetherimide resin identified in this section may be safely used as an article or component of an article intended for use in contact with food, subject to the provisions of this section.

(a) *Identity.* For the purpose of this section, the polyetherimide resin is 1,3-isobenzofurandione, 5,5'[(1-methyl-ethylidene)bis(4,1-phenyleneoxy)] bis-polymer with 1,3-benzenediamine (CAS Reg. No. 61128-46-9), and is derived from the condensation reaction of *m*-phenylenediamine and bisphenol A-dianhydride.

(b) *Optional adjuvants.* The basic polymer identified in paragraph (a) of

this section may contain optional adjuvant substances required in the production of basic resins or finished food-contact articles. The optional adjuvant substances required in the production of the basic polymer may include substances permitted for such use by applicable regulations as set forth in part 174 of this chapter.

(c) *Specifications and extractives limitations—(1) Specifications.* Polyetherimide resin identified in paragraph (a) of this section shall have an intrinsic viscosity in chloroform at 25 °C (77 °F) of not less than 0.35 deciliter per gram as determined by a method titled "Intrinsic Viscosity of ULTEM Polyetherimide Using Chloroform as the Solvent," which is incorporated by reference. Copies are available from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(2) *Extractive limitations.* Extractive limitations are applicable to the basic polyetherimide resin in the form of molded discs of thickness 0.16 centimeter (0.063 inch). The resin discs when extracted with distilled water at 121 °C (250 °F) for 2 hours yield total nonvolatile extractives of not more than 12.3 micrograms per square centimeter.

[50 FR 31351, Aug. 2, 1985; 50 FR 35535, Sept. 3, 1985]

**§ 177.1600 Polyethylene resins, carboxyl modified.**

Carboxyl-modified polyethylene resins may be safely used as the food-contact surface of articles intended for use in contact with food in accordance with the following prescribed conditions:

(a) For the purpose of this section, carboxyl-modified polyethylene resins consist of basic polymers produced when ethylene-methyl acrylate basic copolymers, containing no more than 25 weight percent of polymer units derived from methyl acrylate, are made