

**§ 175.390**

extractives limitations when tested by the methods provided in §175.300(e):

(1) The coating when extracted with distilled water at 180 °F for 24 hours yields total extractives not to exceed 0.05 milligram per square inch of food-contact surface.

(2) The coating when extracted with 50 percent (by volume) ethyl alcohol in distilled water at 180 °F for 24 hours yields total extractives not to exceed 0.05 milligram per square inch.

**§ 175.390 Zinc-silicon dioxide matrix coatings.**

Zinc-silicon dioxide matrix coatings may be safely used as the food-contact surface of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section;

(a) The coating is applied to a metal surface, cured, and washed with water to remove soluble substances.

(b) The coatings are formulated from optional substances which include:

(1) Substances generally recognized as safe.

(2) Substances for which safe conditions of use have been prescribed in §175.300.

(3) Substances identified in paragraph (c) of this section, subject to the limitations prescribed.

(c) The optional substances permitted are as follows:

List of substances	Limitations
Ethylene glycol .....	As a solvent removed by water washing.
Iron oxide.	
Lithium hydroxide .....	Removed by water washing.
Methyl orange .....	As an acid-base indicator.
Potassium dichromate .....	Removed by water washing.
Silica gel.	
Sodium silicate.	
Zinc, as particulate metal.	

(d) The coating in the finished form in which it is to contact food, when extracted with the solvent or solvents characterizing the type of food, and under the conditions of its intended use as shown in table 1 and 2 of §175.300(d) (using 20 percent alcohol as the solvent when the type of food contains approximately 20 percent alcohol) shall yield total extractives not to exceed those prescribed in §175.300(c)(3); lithium ex-

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tractives not to exceed 0.025 milligram per square inch of surface; and chromium extractives not to exceed 0.05 microgram per square inch of surface.

(e) The coatings are used as food-contact surfaces for bulk reusable containers intended for storing, handling, and transporting food.

**PART 176—INDIRECT FOOD ADDITIVES: PAPER AND PAPERBOARD COMPONENTS**

**Subpart A [Reserved]**

**Subpart B—Substances for Use Only as Components of Paper and Paperboard**

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- 176.110 Acrylamide-acrylic acid resins.
  - 176.120 Alkyl ketene dimers.
  - 176.130 Anti-offset substances.
  - 176.150 Chelating agents used in the manufacture of paper and paperboard.
  - 176.160 Chromium (Cr III) complex of *N*-ethyl-*N*-heptadecylfluoro-octane sulfonyl glycine.
  - 176.170 Components of paper and paperboard in contact with aqueous and fatty foods.
  - 176.180 Components of paper and paperboard in contact with dry food.
  - 176.200 Defoaming agents used in coatings.
  - 176.210 Defoaming agents used in the manufacture of paper and paperboard.
  - 176.230 3,5-Dimethyl-1,3,5,2*H*-tetrahydrothiadiazine-2-thione.
  - 176.250 Poly-1,4,7,10,13-pentaaza-15-hydroxyhexadecane.
  - 176.260 Pulp from reclaimed fiber.
  - 176.300 Slimicides.
  - 176.320 Sodium nitrate-urea complex.
  - 176.350 Tamarind seed kernel powder.

AUTHORITY: 21 U.S.C. 321, 342, 346, 348, 379e.

SOURCE: 42 FR 14554, Mar. 15, 1977, unless otherwise noted.

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**Subpart A [Reserved]**

**Subpart B—Substances for Use Only as Components of Paper and Paperboard**

**§ 176.110 Acrylamide-acrylic acid resins.**

Acrylamide-acrylic acid resins may be safely used as components of articles intended for use in producing,

manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Acrylamide-acrylic acid resins are produced by the polymerization of acrylamide with partial hydrolysis or by the copolymerization of acrylamide and acrylic acid.

(b) The acrylamide-acrylic acid resins contain less than 0.2 percent residual monomer.

(c) The resins are used as adjuvants in the manufacture of paper and paperboard in amounts not to exceed that necessary to accomplish the technical effect and not to exceed 2 percent by weight of the paper or paperboard.

**§ 176.120 Alkyl ketene dimers.**

Alkyl ketene dimers may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) The alkyl ketene dimers are manufactured by the dehydrohalogenation of the acyl halides derived from the fatty acids of animal or vegetable fats and oils.

(b) The alkyl ketene dimers are used as an adjuvant in the manufacture of paper and paperboard under such conditions that the alkyl ketene dimers and their hydrolysis products dialkyl ketones do not exceed 0.4 percent by weight of the paper or paperboard.

(c) The alkyl ketene dimers may be used in the form of an aqueous emulsion which may contain sodium lignosulfonate as a dispersant.

**§ 176.130 Anti-offset substances.**

Substances named in paragraphs (b) and (c) of this section may be safely used to prevent the transfer of inks employed in printing and decorating paper and paperboard used for food packaging in accordance with the provisions of this section:

(a) The substances are applied to the nonfood contact, printed side of the paper or paperboard in an amount not greater than that required to accomplish the technical effect nor greater than any specific limitations, where such are provided.

(b) Anti-offset powders are prepared from substances that are generally recognized as safe in food, substances for which prior sanctions or approvals were granted and which are used in accordance with the specific provisions of such sanction or approval, and substances named in paragraph (c) of this section.

(c) The substances permitted are as follows:

Substances	Limitations
Carbon tetrachloride. Methyl hydrogen polysiloxanes. Industrial starch—modified ....  Stannous oleate. Zinc-2-ethyl hexoate.	Complying with § 178.3520 of this chapter.

**§ 176.150 Chelating agents used in the manufacture of paper and paperboard.**

The substances named in paragraph (a) of this section may be safely used in the manufacture of paper and paperboard, in accordance with the conditions prescribed in paragraphs (b) and (c) of this section:

(a) Chelating agents:

List of substances	Limitations
Ammonium fructoheptonate. Ammonium glucoheptonate. Disodium ethylenediamine tetraacetate. Pentasodium salt of diethylenetriamine pentaacetate. Sodium fructoheptonate. Sodium glucoheptonate. Tetrasodium ethylenediamine tetraacetate. Trisodium <i>N</i> -hydroxyethyl ethylenediamine triacetate.	

(b) Any one or any combination of the substances named is used or intended for use as chelating agents.

(c) The substances are added in an amount not greater than that required to accomplish the intended technical effect nor greater than any specific limitation, where such is provided.

**§ 176.160 Chromium (Cr III) complex of *N*-ethyl-*N*-heptadecylfluoro-octane sulfonyl glycine.**

The chromium (Cr III) complex of *N*-ethyl - *N* -heptadecylfluoro-octane sulfonyl glycine containing up to 20 percent by weight of the chromium (Cr III) complex of heptadecylfluoro-octane sulfonic acid may be safely used as a