(b) The optional adjuvant substances required in the production of the resins may include substances generally recognized as safe in food, substances used in accordance with a prior sanction or approval, and the following:

<table>
<thead>
<tr>
<th>List of substances</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl alcohol</td>
<td>Not to exceed 300 p.p.m. as residual solvent in finished resin.</td>
</tr>
<tr>
<td>Ethyl alcohol</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>Not to exceed 1,000 p.p.m. as residual solvent in finished resin.</td>
</tr>
</tbody>
</table>

(c) 4,4′-Isopropylidenediphenol-epichlorohydrin resins shall meet the following nonvolatile extractives limitations:

(1) Maximum extractable nonvolatile fraction of 2 parts per million when extracted with distilled water at 70 °C for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(2) Maximum extractable nonvolatile fraction of 3 parts per million when extracted with n-heptane at 70 °C for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(3) Maximum extractable nonvolatile fraction of 6 parts per million when extracted with n-heptane at 70 °C for 2 hours, using a volume-to-surface ratio of 2 milliliters per square inch.

(d) The provisions of this section are not applicable to 4,4′-isopropylidenediphenol-epichlorohydrin resins listed in other sections of subchapter B of this chapter.

§ 177.1480 Nitrile rubber modified acrylonitrile-methyl acrylate copolymers.

Nitrile rubber modified acrylonitrile-methyl acrylate copolymers identified in this section may be safely used as components of articles intended for food-contact use under conditions of use D, E, F, or G described in table 2 of §176.170(c) of this chapter, subject to the provisions of this section.

(a) For the purpose of this section, nitrile rubber modified acrylonitrile-methyl acrylate copolymers consist of basic copolymers produced by the graft copolymerization of 73–77 parts by weight of acrylonitrile and 23–27 parts by weight of methyl acrylate in the presence of 8–10 parts by weight of butadiene-acrylonitrile copolymers containing approximately 70 percent by weight of polymer units derived from butadiene.

(b) The nitrile rubber modified acrylonitrile-methyl acrylate basic copolymers meet the following specifications and extractives limitations:

(1) Specifications.

(i) Nitrogen content is in the range 16.5–19 percent as determined by Kjeldahl analysis.

(ii) Intrinsic viscosity in acetonitrile at 25 °C is not less than 0.29 deciliter per gram as determined by ASTM
§ 177.1500 Nylon resins.

The nylon resins listed in paragraph (a) of this section may be safely used to produce articles intended for use in processing, handling, and packaging food, subject to the provisions of this section:

(a) The nylon resins are manufactured as described in this paragraph so as to meet the specifications prescribed in paragraph (b) of this section when tested by the methods described in paragraph (d) of this section.

(1) Nylon 66 resins are manufactured by the condensation of hexamethylene-diamine and adipic acid.

(2) Nylon 610 resins are manufactured by the condensation of hexamethylene-diamine and sebacic acid.

(3) Nylon 66/610 resins are manufactured by the condensation of equal-weight mixtures of nylon 66 salts and nylon 610 salts.

(4) Nylon 6/66 resins are manufactured by the condensation and polymerization of nylon 66 salts and epsilon-caprolactam.

(5) Nylon 11 resins are manufactured by the condensation of 11-aminoundecanoic acid.

(6) Nylon 6 resins are manufactured by the polymerization of epsilon-caprolactam.

(7) Nylon 66T resins are manufactured by the condensation of hexamethylene-diamine, adipic acid, and terephthalic acid such that composition in terms of ingredients is 43.1±0.2 weight percent hexamethylene-diamine, 35.3±1.2 weight percent adipic acid, and 21.6±1.2 weight percent terephthalic acid.