# 1993 No. 173

# FOOD

## The Plastic Materials and Articles in Contact with Food Regulations (Northern Ireland) 1993

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| *Made* . . . . . | *2nd April 1993* |
| *Coming into operation* . . | *10th May 1993* |

The Department of Health and Social Services for Northern Ireland, in exercise of the powers conferred on it by Articles 15(2), 16(1), 25(1)(*a*) and (3), 26(3), 32 and 47(2) of the Food Safety (Northern Ireland) Order 1991(**a**) and, being a designated Department(**b**) for the purposes of section 2(2) of the European Communities Act 1972(**c**) in relation to materials and articles in contact with food or drink or intended for such contact, in exercise of the powers conferred on it by the said section 2(2) and of all other powers enabling it in that behalf and after consultation in accordance with Article 47(3) of the said Order with such organisations as appear to it to be representative of interests likely to be substantially affected by these Regulations (in so far as the Regulations are made in exercise of the said Order), hereby makes the following Regulations:

*Citation, commencement and interpretation*

**1.**—(1) These Regulations may be cited as the Plastic Materials and Articles in Contact with Food Regulations (Northern Ireland) 1993 and shall come into operation on 10th May 1993.

(2) In these Regulations—

"the 1987 Regulations means the Materials and Articles in Contact with Food Regulations (Northern Ireland) 1987(**d**);

"capable" means capable as established under regulation 5;

"the Directive" means Commission Directive (EEC) No. 90/128 relating to plastic materials and articles intended to come into contact with foodstuffs(**e**) as amended(**f**);

"human consumption" has the same meaning as it has in the Order;

"import" means import in the course of a business;

"monomer" means anything which is included for the purposes of the Directive among monomers and other starting substances;

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(**a**) 1991 No. 762 (N.I. 7). *See* Article 2(2) for the definitions of "regulations" and "the Department concerned"
(**b**) S.I. 1976/2141
(**c**) 1972 c. 68
(**d**) S.R. 1987 No. 432; the relevant amending Regulations are S.R. 1991 No. 203 and S.R. 1991 No. 344
(**e**) O.J. No. L349, 13.12.90, p. 26
(**f**) O.J. No. L168, 23.6.92, p. 21

"the Order" means the Food Safety (Northern Ireland) Order 1991;

"plastic material or article" means anything which for the purposes of the Directive is included among those plastic materials and articles and parts thereof to which the Directive applies;

"sell" includes offer or expose for sale or have in possession for sale.

(3) For the purposes of these Regulations the supply of any plastic material or article, otherwise than on sale, in the course of a business shall be deemed to be a sale of the plastic material or article.

(4) The Interpretation Act (Northern Ireland) 1954(**a**) shall apply to these Regulations as it applies to a Measure of the Northern Ireland Assembly.

*Restriction on sale etc, and importation of plastic materials and articles*

**2.**—(1) No person shall use any plastic material or article which does not comply with these Regulations in the course of a business in connection with the storage, preparation, packaging, sale or serving of food included for human consumption.

(2) No person shall sell any plastic material or article which does not comply with these Regulations for the purpose of its being used in connection with the storage, preparation, packaging, sale or serving of food included for human consumption.

(3) No person shall sell, or import from any place other than a member State of the European Economic Community, any plastic material or article which does not comply with these Regulations for the purpose of its being used in connection with the storage, preparation, packaging, sale or serving of food for human consumption.

(4) In any proceedings for an offence under this regulation it shall be a defence for the person charged to prove that the plastic material or article in respect of which the offence is alleged to have been committed was intended for export and complied with the importing country's domestic legislation relevant to the alleged offence.

*Transfer of constituents*

**3.**—(1) No plastic material or article shall be capable of transferring its constituents to food with which it may come into contact in quantities exceeding the appropriate limit provided that a plastic material or article shall not be considered capable of transferring its constituents to food with which it may come into contact, in quantities exceeding the appropriate limit, if the only food which that plastic material or article may come into contact with is a food or foods specified in the Table to Part III of Schedule 2 in relation to which no simulant is specified.

(2) For the purposes of this regulation and regulation 4(5) no simulant is specified in relation to a food specified in the Table to Part III of Schedule 2 where there is no "X" placed in the column headed "Simulants to be used opposite that food.

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(**a**) 1954 c. 33 (N.I.)

(3) For the purposes of this regulation the appropriate limit is—

(*a*) an overall migration limit of 60 milligrams of constituents released per kilogram of food in the case of any plastic material or article comprising—

(i) an article which is a container or is comparable to a container or which can be filled, with a capacity of not less than 500 millilitres and not more than 10 litres;

(ii) an article which can be filled and for which it is impracticable to estimate the surface area in contact with food;

(iii) a cap, gasket, stopper or similar device for sealing, and

(*b*) in the case of any other plastic material or article, an overall migration limit of 10 milligrams per square decimetre of the surface area of the plastic material or article.

*Monomers*

**4.**—(1) Subject to the following paragraphs no plastic material or article shall be manufactured with any monomer other than a monomer which is of good technical quality and is identified by PM REF No. (if any), CAS No. (if any) and name respectively in columns 1, 2 and 3 of the relevant fraction of Part I of Schedule 1 and used in accordance with the restrictions (if any) specified in the corresponding entry in column 4, and for the purposes of this regulation the relevant fraction of Part I comprises—

(*a*) in the case of a plastic material or article manufactured before 1st January 1997, Sections A and B of Part I, and

(*b*) in the case of a plastic material or article manufactured after 31st December 1996, Section A of Part I.

(2) Paragraph (1) does not apply to plastic materials or articles comprising—

(*a*) surface coatings obtained from resinous or polymerized products in liquid, powder or dispersion form, including, but not limited to, varnishes, lacquers and paints;

(*b*) silicones;

(*c*) epoxy resins;

(*d*) products obtained by means of bacterial fermentation;

(*e*) adhesives and adhesion promoters;

(*f*) printing inks.

(3) Paragraph (1) shall not be taken to prohibit the presence in any plastic material or article of any substance if the substance is a mixture of monomers of good technical quality identified in the relevant fraction of Part I of Schedule 1.

(4) Subject to the proviso in paragraph (5) where column 4 of the relevant fraction of Part I of Schedule 1 expresses a migration limit of mg/kg in relation to any monomer, no plastic material or article manufactured from that monomer shall be capable of transferring constituents of that monomer to food with which that plastic material or article may come into contact in

quantities exceeding the appropriate limit, and for the purposes of this paragraph the appropriate limit is—

(*a*) in the case of any plastic material or article other than one specified in sub-paragraph (*b*), the number of milligrams expressed therein released per kilogram of food, and

(*b*) if the plastic material or article comprises—

(i) an article which is a container or is comparable to a container or which can be filled, with a capacity of not less than 500 millilitres and not more than 10 litres, or

(ii) sheet, film or other material which cannot be filled or for which it is impracticable to estimate the relationship between the surface area of that material and the quantity of food in contact with that surface area,

one sixth of the number of milligrams expressed therein per square decimetre of surface area of the plastic material or article.

(5) A plastic material or article manufactured from any monomer in respect of which column 4 of the relevant fraction of Part I of Schedule 1 expresses a migration limit of mg/kg shall not be considered capable of transferring constituents of that monomer to food with which that plastic material or article may come into contact in quantities exceeding the appropriate limit in paragraph (4) if the only food which that plastic material or article may come into contact with is a food or foods specified in the Table to Part III of Schedule 2 in relation to which no simulant is specified.

(6) In any proceedings for an offence under regulation 3 comprising the manufacture of a plastic material or article with any monomer (whether or not of good technical quality) other than those identified in the relevant fraction of Part I of Schedule 1, it shall be a defence for the person charged to prove that—

(*a*) each such monomer is present in the finished plastic material as an impurity, a reaction intermediate or a decomposition product,

(*b*) each such monomer is an oligomer or a natural or synthetic macromolecular substance or a mixture thereof and every monomer required to synthesise it is of good technical quality and identified in the relevant fraction of Part I of Schedule 1, or

(*c*) each such monomer falls within either sub-paragraph (*a*) or sub-paragraph (*b*).

(7) Part II of Schedule 1 shall have effect to supplement this regulation and Part I of Schedule 1.

*Method of testing capability of transferring constituents*

**5.**—(1) Plastic material, for the purposes of these Regulations, shall be treated as being capable of transferring constituents to food with which it may come into contact to the extent that it is established for those purposes—

(*a*) in any case other than one to which sub-paragraph (*b*) relates, by the verification methods specified in Schedule 2, and

(*b*) in any case where the extent to which vinyl chloride, as identified in Section A of Part I of Schedule 1, is capable of such transfer falls to be established, by the method referred to in regulation 14(2) of the 1987 Regulations.

(2) In Schedule 2 references to migration or release of a substance shall be construed as references to the transfer of constituents to the simulant representing the food or, as the case may be, food with which it may come into contact.

*Labelling*

**6.**—(1) Subject to paragraph (2), any plastic material which is intended to be placed in contact with food and is at a marketing stage other than the retail stage shall be accompanied by a written declaration attesting that it complies with the legislation applicable to it.

(2) Paragraph (1) shall not apply to any plastic material or article which by its nature is clearly intended to come into contact with food.

*Enforcement*

**7.** Each district council shall enforce and execute these Regulations in its own district.

*Offences*

**8.**—(1) If any person contravenes any of the provisions of these Regulations he shall be guilty of an offence.

(2) Any person who—

(*a*) intentionally obstructs any person acting in the execution of these Regulations, or

(*b*) without reasonable cause, fails to give to any person acting in the execution of these Regulations any assistance or information which that person may reasonably require of him for the performance of his functions under these Regulations,

shall be guilty of an offence, but nothing in sub-paragraph (*b*) shall be construed as requiring any person to answer any question or give any information if to do so might incriminate him.

(3) Any person who, in purported compliance with any such requirement as is mentioned in paragraph (2)(*b*)—

(*a*) furnishes information which he knows to be false or misleading in a material particular, or

(*b*) recklessly furnishes information which is false or misleading in a material particular,

shall be guilty of an offence.

(4) Where the commission by any person of an offence under these Regulations is due to an act or default of some other person, that other person shall be guilty of the offence; and a person may be charged with and convicted of the offence by virtue of this paragraph whether or not proceedings are taken against the first mentioned person.

(5) In any proceedings for an offence under these Regulations it shall, subject to paragraph (9), be a defence for the person charged to prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence by himself or by a person under his control.

(6) Without prejudice to the generality of paragraph (5), a person charged with an offence under these Regulations who neither—

(*a*) prepared the plastic material or article in respect of which the offence is alleged to have been committed, nor

(*b*) imported it into Northern Ireland,

shall be taken to have established the defence provided by that paragraph if he satisfies the requirements of paragraph (7) or (8).

(7) A person satisfies the requirements of this paragraph if he proves—

(*a*) that the commission of the offence was due to an act or default of another person who was not under his control, or to reliance on information supplied by such a person;

(*b*) that he carried out all such checks of the plastic material or article in question as were reasonable in all the circumstances, or that it was reasonable in all the circumstances for him to rely on checks carried out by the person who supplied the plastic material or article to him; and

(*c*) that he did not know and had no reason to suspect at the time of the commission of the alleged offence that his act or omission would amount to an offence under these Regulations.

(8) A person satisfies the requirements of this paragraph if the offence is one of sale and he proves—

(*a*) that the commission of the offence was due to an act or default of another person who was not under his control, or to reliance on information supplied by such a person;

(*b*) that the sale of which the alleged offence consisted was not a sale under his name or mark; and

(*c*) that he did not know, and could not reasonably have been expected to know, at the time of the commission of the alleged offence that his act or omission would amount to an offence under these Regulations.

(9) If in any case the defence provided by paragraph (5) involves the allegation that the commission of the offence was due to an act or default of another person, or to reliance on information supplied by another person, the person charged shall not, without leave of the court, be entitled to rely on that defence unless—

(*a*) at least seven clear days before the hearing, and

(*b*) where he has previously appeared before a court in connection with the alleged offence, within one month of his first such appearance,

he has served on the prosecutor a notice in writing giving such information identifying or assisting in the identification of that other person as was then in his possession, and in this paragraph any reference to appearing before a court shall be construed as including a reference to being brought before a court.

(10) Any person guilty of an offence under these Regulations shall be liable on summary conviction to a fine not exceeding £2,000 or to imprisonment for a term not exceeding three months or to both and on conviction on indictment to a fine or to imprisonment for a term not exceeding 2 years or both.

*Presumption as to food with which a plastic material or article is to come into contact.*

**9.** In establishing which descriptions of food a plastic material or article may come into contact with it shall be assumed for the purposes of these Regulations, until the contrary is proved, that, if particulars are shown in relation to that plastic material or article in accordance with the 1987 Regulations, those particulars are accurate and that, unless the particulars so indicate, there are no restrictions on the intended conditions of contact.

*Application of other provisions*

**10.**—(1) The following provisions of the 1987 Regulations shall apply in relation to plastic materials and articles as they apply to materials and articles for the purposes of those Regulations, as if those provisions formed part of these Regulations—

(*a*) regulation 12 (powers of authorised officers);

(*b*) regulation 13 (analysis, examination and testing);

(*c*) regulation 16 (confidentiality);

(*d*) regulation 19 (evidence of analysis); and

(*e*) regulation 20 (analysis by Government chemist).

(2) Article 4(4) of the Order (relating to the presumption of intention for human consumption) shall apply for the purposes of these Regulations as it applies for the purposes of the Order.

(3) Articles 29 and 30 of the Order (which deal with procurement and analysis of samples) shall, in so far as they relate to plastic materials or articles, be modified to the extent necessary for the purposes of these Regulations.

*Transitional provision*

**11.** Until 1st April 1995 a plastic material or article which has been manufactured using one or more of the monomers identified by PM/REF No. (if any), CAS No. (if any) and name respectively in columns 1, 2 and 3 of Section C of Part I of Schedule 1—

(*a*) may be used in the course of a business in connection with the storage, preparation, packaging, sale or serving of food for human consumption,

(*b*) may be sold for the purpose of its being in connection with the storage, preparation, packaging, sale or serving of food for human consumption, or

(*c*) may be imported for the purpose of its being used in connection with the storage, preparation, packaging, sale or serving of food for human consumption,

provided that such monomer is of good technical quality and is used in accordance with the restrictions (if any) specified in the corresponding entry in column 4 thereof and where column 4 expresses a migration limit limit of mg/kg in relation to any such monomer that monomer shall comply with the appropriate migration limit in regulation 4(4).

Sealed with the Official Seal of the Department of Health and Social Services on 2nd April 1993.

(L.S.) *J. Scott*

Assistant Secretary

SCHEDULE 1 Regulation 4

PART I

AUTHORISED MONOMERS

SECTION A

**Monomers authorised without time limit**

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 1. | 10030 | 000514-10-3 | Abietic acid | |
| 2. | 10060 | 000075-07-0 | Acetaldehyde | |
| 3. | 10090 | 000064-19-7 | Acetic acid | |
| 4. | 10120 | 000108-05-4 | Acetic acid. vinyl ester | The specific migration of the substance shall not exceed 12 mg/kg. |
| 5. | 10150 | 000108-24-7 | Acetic anhydride | |
| 6. | 10210 | 000074-86-2 | Acetylene | |
| 7. | 10630 | 000079-06-1 | Acrylamide | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 8. | 10690 | 000079-10-7 | Acrylic acid | |
| 9. | 10780 | 000141-32-2 | Acrylic acid, *n*-butyl ester | |
| 10. | 10810 | 002998-08-5 | Acrylic acid, *sec.* butyl ester | |
| 11. | 10840 | 001663-39-4 | Acrylic acid, *tert.* butyl ester | |
| 12. | 11470 | 000140-88-5 | Acrylic acid, ethyl ester | |
| 13. | As item 17 | 000818-61-1 | Acrylic acid, hydroxyethyl ester | |
| 14. | 11590 | 000106-63-8 | Acrylic acid, isobutyl ester | |
| 15. | 11680 | 000689-12-3 | Acrylic acid, isopropyl ester | |
| 16. | 11710 | 000096-33-3 | Acrylic acid, methyl ester | |
| 17. | 11830 | 000818-61-1 | Acrylic acid, monoester with ethylene glycol | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 18. | 11980 | 000925-60-0 | Acrylic acid, propyl ester | |
| 19. | 12100 | 000107-13-1 | Acrylonitrile | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.02 mg/kg, analytical tolerance included). |
| 20. | 12130 | 000124-04-9 | Adipic acid | |
| 21. | 12280 | 002035-75-8 | Adipic anhydride | |
| 22. | 12310 | | Albumin | |
| 23. | 12340 | | Albumin, coagulated by formaldehyde | |
| 24. | 12375 | | Alcohols, aliphatic, monohydric, saturated, linear, primary (C4-C22) | |
| 25. | 12670 | 002855-13-2 | 1-Amino-3-aminomethyl-3,5,5-trimethyl-cyclohexane | The specific migration of this substance shall not exceed 6 mg/kg. |
| 26. | 12788 | 002432-99-7 | 11-Aminoundecanoic acid | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 27. | 12820 | 000123-99-9 | Azelaic acid | |
| 28. | 12970 | 004196-95-6 | Azelaic anhydride | |
| 29. | 13000 | 001477-55-0 | 1.3-Benzenedimethanamine | The specific migration of this substance shall not exceed 0.05 mg/kg. |
| 30. | 13090 | 000065-85-0 | Benzoic acid | |
| 31. | 13150 | 000100-51-6 | Benzyl alcohol | |
| 32. | As item 72 | 000111-46-6 | Bis(2-hydroxyethyl) ether | As item 72. |
| 33. | As item 192 | 000077-99-6 | 2,2-Bis(hydroxymethyl)-butan-1-ol | As item 192. |
| 34. | 13390 | 000105-08-8 | 1,4Bis(hydroxymethyl)-cyclohexane | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 35. | 13480 | 000080-05-7 | 2,2-Bis(4-hydroxy-phenyl)-propane | The specific migration of this substance shall not exceed 3 mg/kg. |
| 36. | 13510 | 001675-54-3 | 2,2-Bis(4-hydroxy-phenyl)-propane bis(2.3-epoxy-propyl) ether | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg or the specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.02 mg/kg, analytical tolerance included). |
| 37. | As item 84 | 000110-98-5 | Bis(hydroxypropyl) ether | |
| 38. | As item 71 | 005124-30-1 | Bis(4-isocyanato-cyclohexyl)methane | As item 71. |
| 39. | 13530 | 038103-06-9 | 2,2-Bis(4-hydroxy-phenyl)-propane bis(phthalic anhydride) | The specific migration of this substance shall not exceed 0.05 mg/kg. |
| 40. | 13600 | 047465-97-4 | 3,3-Bis(3-methyl-4-hydroxyphenyl) indolin-2-one | The specific migration of this substance shall not exceed 1.8 mg/kg. |
| 41. | As item 35 | 000080-05-7 | Bisphenol A | As item 35. |
| 42. | As item 36 | 001675-54-3 | Bisphenol A bis(2,3-epoxypropyl) ether | As item 36. |
| 43. | 13614 | 038103-06-9 | Bisphenol A bis(phthalic anhydride) | As item 39. |
| 44. | 13630 | 000106-99-0 | Butadiene | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg or the specific migration of this substance shall be not detactable (when measured by a method with a limit of detection of 0.02 mg/kg, analytical tolerance included). |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 45. | 13690 | 000107-88-0 | Butan-1,3-diol | |
| 46. | 13840 | 000071-36-3 | Butan-1-ol | |
| 47. | 13870 | 000106-98-9 | But-1-ene | |
| 48. | 13900 | 000107-01-7 | But-2-ene | |
| 49. | 14110 | 000123-72-8 | Butyraldehyde | |
| 50. | 14140 | 000107-92-6 | Butyric acid | |
| 51. | 14170 | 000106-31-0 | Butyric anhydride | |
| 52. | 14200 | 000105-60-2 | Caprolactam | The specific migration of this substance alone or together with item 53 shall not exceed a total of 15 mg/kg. |
| 53. | 14230 | 002123-24-2 | Caprolactam, sodium salt | The specific migration of this substance alone or together with item 52 shall not exceed a total of 15 mg/kg (expressed as caprolactam). |
| 54. | 14320 | 000124-07-2 | Caprylic acid | |
| 55. | 14350 | 000630-08-0 | Carbon monoxide | |
| 56. | 14380 | 000075-44-5 | Carbonyl chloride | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg. |
| 57. | 14410 | 008001-79-4 | Castor oil (food grade quality) | |
| 58. | 14500 | 009004-34-6 | Cellulose | |
| 59. | 14530 | 007782-50-5 | Chlorine | |
| 60. | As item 85 | 000106-89-8 | 1-Chloro-2,3-epoxy-propane | As item 85. |
| 61. | 14680 | 000077-92-9 | Citric acid | |
| 62. | 14710 | 000108-39-4 | *m*-Cresol | |
| 63. | 14740 | 000095-48-7 | *o*-Cresol | |
| 64. | 14770 | 000106-44-5 | *p*-Cresol | |
| 65. | As item 34 | 000105-08-8 | 1,4-Cyclohexane-dimethanol | |
| 66. | 14950 | 003173-53-3 | Cyclohexyl isocyanate | The quantity in the finished plastic material or article of any substance within, or any |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| | | | | combination of substances within, items 66, 71, 79, 81, 82, 83, 106, 132, 135, 186, 187 and 188 shall not exceed 1 mg/kg (expressed as isocyanate moiety). |
| 67. | 15100 | 000112-30-1 | Decan-1-ol | |
| 68. | As item 88 | 000107-15-3 | 1,2-Diaminoethane | As item 88. |
| 69. | As item 105 | 000124-09-4 | 1,6-Diaminohexane | As item 105. |
| 70. | 15250 | 000110-60-1 | 1,4-Diaminobutane | |
| 71. | 15700 | 005124-30-1 | Dicyclohexyl-methane-4,4′-diisocyanate | As item 66. |
| 72. | 15760 | 000111-46-6 | Diethylene glycol | The specific migration of this substance alone or together with item 89 shall not exceed a total of 30 mg/kg. |
| 73. | 15880 | 000120-80-9 | 1,2-Dihydroxy-benzene | The specific migration of this substance shall not exceed 6 mg/kg. |
| 74. | 15910 | 000108-46-3 | 1,3-Dihydroxy-benzene | The specific migration of this substance shall not exceed 2.4 mg/kg. |
| 75. | 15940 | 000123-31-9 | 1,4-Dihydroxy-benzene | The specific migration of this substance shall not exceed 0.6 mg/kg. |
| 76. | 15970 | 000611-99-4 | 4.4′-Dihydroxy-benzophenone | The specific migration of this substance shall not exceed 6 mg/kg. |
| 77. | 16000 | 000092-88-6 | 4,4′-Dihydroxy-biphenyl | The specific migration of this substance shall not exceed 6 mg/kg. |
| 78. | 16150 | 000108-01-0 | Dimethyla-minoethanol | The specific migration of this substance shall not exceed 18 mg/kg. |
| 79. | 16240 | 000091-97-4 | 3,3′-Dimethyl-4,4′-di-isocyanato-biphenyl | As item 66. |
| 80. | 16480 | 000126-58-9 | Dipentaerythritol | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 81. | 16570 | 004128-73-8 | Diphenylether-4,4′-diisocyanate | As item 66. |
| 82. | 16600 | 005873-54-1 | Diphenylmethane-2,4′-diisocyanate | As item 66. |
| 83. | 16630 | 000101-68-8 | Diphenylmethane-4,4′-diisocyanate | As item 66. |
| 84. | 16660 | 000110-98-5 | Dipropylene glycol | |
| 85. | 16750 | 000106-89-8 | Epichlorohydrin | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg. |
| 86. | 16780 | 000064-17-5 | Ethanol | |
| 87. | 16950 | 000074-85-1 | Ethylene | |
| 88. | 16960 | 000107-15-3 | Ethylenediamine | The specific migration of this substance shall not exceed 12 mg/kg. |
| 89. | 16990 | 000107-21-1 | Ethylene glycol | The specific migration of this substance alone or together with item 72 shall not exceed a total of 30 mg/kg. |
| 90. | 17005 | 000151-56-4 | Ethyleneimine | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 91. | 17020 | 000075-21-8 | Ethylene oxide | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg. |
| 92. | 17170 | 061788-47-4 | Fatty acids, coco | |
| 93. | 17200 | 068308-53-2 | Fatty acids, soya | |
| 94. | 17230 | 061790-12-3 | Fatty acids, tall oil | |
| 95. | 17260 | 000050-00-0 | Formaldehyde | The specific migration of this substance shall not exceed 15 mg/kg. |
| 96. | 17290 | 000110-17-8 | Fumaric acid | |
| 97. | 17530 | 000050-99-7 | Glucose | |
| 98. | 18010 | 000110-94-1 | Glutaric acid | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 99. | 18070 | 000108-55-4 | Glutaric anhydride | |
| 100. | 18100 | 000056-81-5 | Glycerol | |
| 101. | 18250 | 000115-28-6 | Hexachloroendo-methylenetetrahy-drophthalic acid | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 102. | 18280 | 000115-27-5 | Hexachloroendo-methylenetetra-hydrophthalic anhydride | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 103. | 18310 | 036653-82-4 | Hexadecan-1-ol | |
| 104. | 18430 | 000116-15-4 | Hexafluoro-propylene | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 105. | 18460 | 000124-09-4 | Hexamethylene-diamine | The specific migration of this substance shall not exceed 2.4 mg/kg. |
| 106. | 18640 | 000822-06-0 | Hexamethylene diisocyanate | As item 66. |
| 107. | 18670 | 000100-97-0 | Hexamethylenete-tramine | The specific migration of this substance shall not exceed 15 mg/kg (expressed as formaldehyde). |
| 108. | As item 75 | 000123-31-9 | Hydroquinone | As item 75. |
| 109. | 18880 | 000099-96-7 | *p*-Hydroxybenzoic acid | |
| 110. | 19000 | 000115-11-7 | Isobutene | |
| 111. | 19470 | 000143-07-7 | Lauric acid | |
| 112. | 19510 | 011132-73-3 | Lignocellulose | |
| 113. | 19540 | 000110-16-7 | Maleic acid | The specific migration of this substance alone or together with item 114 shall not exceed a total of 30 mg/kg. |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 114. | 19960 | 000108-31-6 | Maleic anhydride | The specific migration of this substance alone or together with item 113 shall not exceed a total of 30 mg/kg (expressed as maleic acid). |
| 115. | As item 190 | 000108-78-1 | Melamine | As item 190. |
| 116. | 20020 | 000079-41-4 | Methacrylic acid | |
| 117. | 20110 | 000097-88-1 | Methacrylic acid, butyl ester | |
| 118. | 20140 | 002998-18-7 | Methacrylic acid, *sec*. butyl ester | |
| 119. | 20170 | 000585-07-9 | Methacrylic acid, *tert*. butyl ester | |
| 120. | 20890 | 000097-63-2 | Methacrylic acid, ethyl ester | |
| 121. | 21010 | 000097-86-9 | Methacrylic acid, isobutyl ester | |
| 122. | 21100 | 004655-34-9 | Methacrylic acid, isopropyl ester | |
| 123. | 21130 | 000080-62-6 | Methacrylic acid, methyl ester | |
| 124. | 21190 | 000868-77-9 | Methacrylic acid, monoester with ethyleneglycol | |
| 125. | 21340 | 002210-28-8 | Methacrylic acid, propyl ester | |
| 126. | 21460 | 000760-93-0 | Methacrylic anhydride | |
| 127. | 21490 | 000126-98-7 | Methacrylonitrile | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.02 mg/kg, analytical tolerance included). |
| 128. | 21550 | 000067-56-1 | Methanol | |
| 129. | 21940 | 000924-42-5 | *N*-Methylolacrylamide | The specific migration of this substance shall be not detectable (when |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| | | | | measured by a method with a limit of detection of 0.01 mg/kg). |
| 130. | 22150 | 000691-37-2 | 4,Methylpent-1-ene | The specific migration of this substance shall not exceed 0.02 mg/kg. |
| 131. | 22350 | 000544-63-8 | Myristic acid | |
| 132. | 22420 | 003173-72-6 | 1,5-Naphthalene diisocyanate | As item 66. |
| 133. | 22450 | 009004-70-0 | Nitrocellulose | |
| 134. | 22480 | 000143-08-8 | Nonan-1-ol | |
| 135. | 22570 | 000112-96-9 | Octadecyl isocyanate | As item 66. |
| 136. | 22600 | 000111-87-5 | Octan-1-ol | |
| 137. | 22660 | 000111-66-0 | Oct-1-ene | The specific migration of this substance shall not exceed 15 mg/kg. |
| 138. | 22763 | 000112-80-1 | Oleic acid | |
| 139. | 22780 | 000057-10-3 | Palmitic acid | |
| 140. | 22840 | 000115-77-5 | Pentaerythritol | |
| 141. | 22870 | 000071-41-0 | Pentan-1-ol | |
| 142. | 22960 | 000108-95-2 | Phenol | |
| 143. | 23050 | 000108-45-2 | 1,3-Phenylene-diamine | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg. |
| 144. | As item 56 | 000075-44-5 | Phosgene | As item 56. |
| 145. | 23170 | 007664-38-2 | Phosphoric acid | |
| 146. | As item 181 | | Phthalic acid | As item 181. |
| 147. | 23200 | 000088-99-3 | *o*-Phthalic Acid | |
| 148. | 23230 | 000131-17-9 | Phthalic acid diallyl ester | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.01 mg/kg). |
| 149. | 23380 | 000085-44-9 | Phthalic anhydride | |
| 150. | 23470 | 000080-56-8 | *alpha*-Pinene | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 151. | 23500 | 000127-91-3 | *beta*-Pinene | |
| 152. | 23590 | 025322-68-3 | Polyethylene glycol | |
| 153. | 23650 | 025322-69-4 | Polypropylene glycol (molecular weight greater than 400) | |
| 154. | 23740 | 000057-55-6 | Propan-1,2-diol | |
| 155. | 23800 | 000071-23-8 | Propan-1-ol | |
| 156. | 23830 | 000067-63-0 | Propan-2-ol | |
| 157. | 23860 | 000123-38-6 | Propionaldehyde | |
| 158. | 23890 | 000079-09-4 | Propionic acid | |
| 159. | 23950 | 000123-62-6 | Propionic anhydride | |
| 160. | 23980 | 000115-07-1 | Propylene | |
| 161. | 24010 | 000075-56-9 | Propylene oxide | The quantity of this substance in the finished plastic material or article shall not exceed 1 mg/kg. |
| 162. | As item 73 | 000120-80-9 | Pyrocatechol | As item 73. |
| 163. | 24070 | 073138-82-6 | Resin acids and rosin acids | |
| 164. | As item 74 | 000108-46-3 | Resorcinol | As item 74. |
| 165. | 24100 | 008050-09-7 | Rosin | |
| 166. | 24130 | 008050-09-7 | Rosin gum | |
| 167. | 24160 | 008052-10-6 | Rosin tall oil | |
| 168. | 24190 | 009014-63-5 | Rosin wood | |
| 169. | 24250 | 009006-04-6 | Rubber, natural | |
| 170. | 24270 | 000069-72-7 | Salicylic acid | |
| 171. | 24280 | 000111-20-6 | Sebacic acid | |
| 172. | 24430 | 002561-88-8 | Sebacic anhydride | |
| 173. | 24490 | 000050-70-4 | Sorbitol | |
| 174. | 24520 | 008001-22-7 | Soybean oil | |
| 175. | 24550 | 000057-11-4 | Stearic acid | |
| 176. | 24610 | 000100-42-5 | Styrene | |
| 177. | 24820 | 000110-15-6 | Succinic acid | |
| 178. | 24850 | 000108-30-5 | Succinic anhydride | |
| 179. | 24880 | 000057-50-1 | Sucrose | |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 180. | 24887 | 006362-79-4 | 5-Sulphoisophthalic acid, monosodium salt | The specific migration of this substance shall not exceed 0.05 mg/kg. |
| 181. | 24910 | 000100-21-0 | Terephthalic acid | The specific migration of this substance shall not exceed 7.5 mg/kg. |
| 182. | 24970 | 000120-61-6 | Terephthalic acid, dimethyl ester | |
| 183. | 25090 | 000112-60-7 | Tetraethylene glycol | |
| 184. | 25150 | 000109-99-9 | Tetrahydrofuran | The specific migration of this substance shall not exceed 0.6 mg/kg. |
| 185. | 25180 | 000102-60-3 | *N,N,N',N'*-Tetrakis (2-hydroxypropyl) ethylenediamine | |
| 186. | 25210 | 000584-84-9 | 2,4-Toluene diisocyanate | As item 66. |
| 187. | 25240 | 000091-08-7 | 2,6-Toluene diisocyanate | As item 66. |
| 188. | 25270 | 026747-90-0 | 2,4-Toluene diisocyanate dimer | As item 66. |
| 189. | 25360 | | Trialkyl(C5-C15) acetic acid, 2,3-epoxypropyl ester | The specific migration of this substance shall not exceed 6 mg/kg. |
| 190. | 25420 | 000108-78-1 | 2,4,6-Triamino-1,3,5-triazine | The specific migration of this substance shall not exceed 30 mg/kg. |
| 191. | 25510 | 000112-27-6 | Triethylene glycol | |
| 192. | 25600 | 000077-99-6 | 1,1,1-Trimethylol-propane | The specific migration of this substance shall not exceed 6 mg/kg. |
| 193. | 25910 | 024800-44-0 | Tripropylene glycol | |
| 194. | 25960 | 000057-13-6 | Urea | |
| 195. | 26050 | 000075-01-4 | Vinyl chloride | The restrictions are those in regulation 5(1)(a) and (b) of the 1987 Regulations when analysed by the method referred to in regulation 14 of those Regulations. |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 196. | 26110 | 000075-35-4 | Vinylidene chloride | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg or the specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.05 mg/kg). |

SECTION B

**Monomers authorised up to the end of 1996**

| | | | |
|---|---|---|---|
| 1. | As item 92 | 000542-02-9 | Acetoguanamine |
| 2. | 10160 | 002206-94-2 | *alpha*-Acetoxy-styrene |
| 3. | 10162 | 010521-96-7 | *beta*-Acetoxy-styrene |
| 4. | 10480 | | Acids, aliphatic, monocarboxylic, saturated (C2-C24) |
| 5. | 10510 | | Acids, aliphatic, monocarboxylic, unsaturated (C3-C24) |
| 6. | 10599/70 | | Acids, fatty, unsaturated (C18) |
| 7. | 10599/90 | 061788-89-4 | Acids, fatty, unsaturated (C18), dimers |
| 8. | 10599/92 | 068783-41-5 | Acids, fatty, unsaturated (C18), dimers, hydrogenated |
| 9. | 10600 | | Acids, linear, with an even number of carbon atoms (C8-C22), and the dimers and trimmers of the unsaturated acids |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 10. | 10660 | 015214-89-8 | Acrylamidomethyl-propanesulphonic acid | |
| 11. | 10720 | 000999-55-3 | Acrylic acid, allyl ester | |
| 12. | 10750 | 002495-35-4 | Acrylic acid, benzyl ester | |
| 13. | 10775 | 084100-23-2 | Acrylic acid, 4-*tert*.-butylcyclohexyl ester | |
| 14. | 10930 | 003066-71-5 | Acrylic acid, cyclohexyl ester | |
| 15. | 10990 | 002156-96-9 | Acrylic acid, decyl ester | |
| 16. | 11000 | 050976-02-8 | Acrylic acid, dicyclopen-tadienyl ester | |
| 17. | 11005 | 012542-30-2 | Acrylic acid, dicyclopentenyl ester | |
| 18. | 11010 | 024447-78-7 | Acrylic acid, diester with 2,2-bis(4-hydroxyphenyl)-propane bis(2-hydroxy-ethyl) ether | |
| 19. | 11020 | 019485-03-1 | Acrylic acid, diester with butan-1,3-diol | |
| 20. | 11050 | 001070-70-8 | Acrylic acid, diester with butan-1,4-diol | |
| 21. | 11080 | 004074-88-8 | Acrylic acid, diester with diethyleneglycol | |
| 22. | 11110 | 002274-11-5 | Acrylic acid, diester with ethyleneglycol | |
| 23. | 11140 | 013048-33-4 | Acrylic acid, diester with hexan-1,6-diol | |
| 24. | 11170 | 026570-48-9 | Acrylic acid, diester with polyethyleneglycol | |
| 25. | 11180 | 017831-71-9 | Acrylic acid, diester with tetraethyleneglycol | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 26. | 11195 | 068901-05-3 | Acrylic acid, diester with tripropyleneglycol | |
| 27. | 11200 | 002426-54-2 | Acrylic acid, 2-(diethylamino) ethyl ester | |
| 28. | 11230 | 002439-35-2 | Acrylic acid, 2-(dimethylamino) ethyl ester | |
| 29. | 11245 | 002156-97-0 | Acrylic acid, dodecyl ester | |
| 30. | 11260 | 000106-90-1 | Acrylic acid, 2,3-epoxypropyl ester | The quantity in the finished plastic material or article of any substance within, or any combination of substances within, items 30, 56, 70 and 181 shall not exceed 5 mg/kg (expressed as epoxy). |
| 31. | 11500 | 000103-11-7 | Acrylic acid, 2-ethylhexyl ester | |
| 32. | 11520 | 002918-23-2 | Acrylic acid, 2-hydroxyisopropyl ester(=acrylic acid, 2-hydroxy-1-methylethyl ester) | |
| 33. | 11530 | 000999-61-1 | Acrylic acid, 2-hydroxypropyl ester | |
| 34. | 11532 | 002761-08-2 | Acrylic acid, 3-hydroxypropyl ester | |
| 35. | 11560 | 005888-33-5 | Acrylic acid, isobornyl ester | |
| 36. | 11620 | 001330-61-6 | Acrylic acid, isodecyl ester | |
| 37. | 11695 | 003121-61-7 | Acrylic acid, 2-methoxyethyl ester | |
| 38. | 11650 | 029590-42-9 | Acrylic acid, isooctyl ester | |
| 39. | 11740 | 010095-13-3 | Acrylic acid, monoester with butan-1,3-diol | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 40. | 11770 | 002478-10-6 | Acrylic acid, monoester with butan-1,4-diol | |
| 41. | 11800 | 013533-05-6 | Acrylic acid, monoester with diethyleneglycol | |
| 42. | 11860 | | Acrylic acid, monoester with propyleneglycol | |
| 43. | 11875 | 004813-57-4 | Acrylic acid, octadecyl ester | |
| 44. | 11890 | 002499-59-4 | Acrylic acid, *n*-octyl ester | |
| 45. | 12010 | 040074-09-7 | Acrylic acid, 2-sulphoethyl ester | |
| 46. | 12040 | 039121-78-3 | Acrylic acid, sulphopropyl ester | |
| 47. | 12055 | 094160-26-6 | Acrylic acid, triester with glycerol tris(2-hydroxypropyl) ether | |
| 48. | 12062 | 075577-70-7 | Acrylic acid, triester with 1,1,1-trimethylolpropane tris(2-hydroxyethyl) ether | |
| 49. | 12160 | 002998-04-1 | Adipic acid, diallyl ester | |
| 50. | 12190 | 000105-97-5 | Adipic acid, didecyl ester | |
| 51. | 12220 | 027178-16-1 | Adipic acid, diisodecyl ester | |
| 52. | 12250 | 000123-79-5 | Adipic acid, dioctyl ester | |
| 53. | 12265 | 004074-90-2 | Adipic acid, divinyl ester | |
| 54. | 12370 | | Alcohols, aliphatic, monohydric, saturated, linear, secondary or tertiary (C4-C22) | |
| 55. | 12610 | 000107-18-6 | Allyl alcohol | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 56. | 12640 | 000106-92-3 | Allyl 2,3-epoxypropyl ether | As item 30. |
| 57. | 12700 | 000150-13-0 | *p*-Aminobenzoic acid | |
| 58. | 12790 | 000080-46-6 | *p-tert.*-Amylphenol | |
| 59. | 12850 | 029602-44-6 | Azelaic acid, bis(2-hydroxyethyl) ester | |
| 60. | 12910 | 001732-10-1 | Azelaic acid, dimethyl ester | |
| 61. | As item 255 | 000528-44-9 | 1,2,4-Benzenetricarboxylic acid | As item 255. |
| 62. | 13060 | 004422-95-1 | 1,3,5-Benzenetricarboxylic acid trichloride | |
| 63. | As item 94 | 000091-76-9 | Benzoguanamine | |
| 64. | 13210 | 001761-71-3 | Bis(4-amino-cyclohexyl)-methane | |
| 65. | 13328 | 000104-38-1 | Bis(2-hydroxyethyl) ether of hydroquinone | |
| 66. | As item 103 | 000080-09-1 | Bisphenol S | |
| 67. | 13660 | 000584-03-2 | Butan-1,2-diol | |
| 68. | 13720 | 000110-63-4 | Butan-1,4-diol | |
| 69. | 13750 | 000513-85-9 | Butan-2,3-diol | |
| 70. | 13780 | 002425-79-8 | Butan-1,4-diol bis(2,3-epoxy-propyl) ether | As item 30. |
| 71. | 13810 | 000505-65-7 | Butan-1,4-diol formal | |
| 72. | 13932 | 000598-32-3 | But-3-en-2-ol | |
| 73. | 13960 | 001852-16-0 | *N*-(Butoxymethyl)-acrylamide | |
| 74. | 14008 | 000098-52-2 | 4-*tert.*-Butylcyclo-hexanol | |
| 75. | 14020 | 000098-54-4 | 4-*tert.*-Butylphenol | |
| 76. | 14035 | 001746-23-2 | 4-*tert.*-Butylstyrene | |
| 77. | 14260 | 000502-44-3 | Caprolactone | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 78. | As item 101, Section A | 000115-28-6 | Chlorendic acid | As item 101, Section A. |
| 79. | 14560 | 000126-99-8 | 2-Chlorobutan-1,3-diene | |
| 80. | 14650 | 000079-38-9 | Chlorotrifluoro-ethylene | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 81. | 14800 | 003724-65-0 | Crotonic acid | |
| 82. | 14833 | 000623-43-8 | Crotonic acid, methyl ester | |
| 83. | 14980 | 001631-25-0 | *N*-Cyclohexyl-maleimide | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 84. | 15020 | 002182-05-0 | Cyclohexyl vinyl ether | |
| 85. | 15030 | 000931-88-4 | Cyclooctene | |
| 86. | 15060 | 000142-29-0 | Cyclopentene | |
| 87. | 15070 | 001647-16-1 | Dec-1,9-diene | |
| 88. | 15095 | 000334-48-5 | Decanoic acid | |
| 89. | 15130 | 000872-05-9 | Dec-l-ene | |
| 90. | 15260 | 000646-25-3 | 1,10-Diamino-decane | |
| 91. | 15270 | 002783-17-7 | 1,12-Diamino-dodecane | |
| 92. | 15280 | 000542-02-9 | 2,4-Diamino-6-methyl-1,3,5-triazine | |
| 93. | 15295 | 000373-44-4 | 1,8-Diaminooctane | |
| 94. | 15310 | 000091-76-9 | 2,4-Diamino-6-phenyl-1,3,5,-triazine | |
| 95. | 15340 | 000109-76-2 | 1,3-Diaminopropane | |
| 96. | 15370 | 003236-53-1 | 1,6-Diamino-2,2,4-trimethylhexane | |
| 97. | 15400 | 003236-54-2 | 1,6-Diamino-2,4,4-trimethylhexane | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 98. | 15490 | 002215-89-6 | 4,4′-Dicarboxy-diphenyl ether | |
| 99. | 15580 | 001653-19-6 | 2,3-Dichlorobuta-1,3-diene | |
| 100. | 15610 | 000080-07-9 | 4,4′Dichloro-diphenyl sulphone | |
| 101. | 15730 | 000077-73-6 | Dicyclopentadiene | |
| 102. | 15790 | 000111-40-0 | Diethylenetriamine | |
| 103. | 16090 | 000080-09-1 | 4,4′-Dihydroxy-diphenyl sulphone | |
| 104. | 16120 | 000110-97-4 | Diisopropanolamine | |
| 105. | 16180 | 005205-93-6 | *N*-(Dimethylamino-propyl)metha-crylamide | |
| 106. | 16210 | 006864-37-5 | 3,3′-Dimethyl-4,4′-diaminodicyclo-hexylmethane | |
| 107. | 16252 | 000110-03-2 | 2,5-Dimethylhexan-2,5-diol | |
| 108. | 16270 | 000526-75-0 | 2,3-Dimethylphenol | |
| 109. | 16300 | 000105-67-9 | 2,4-Dimethylphenol | |
| 110. | 16330 | 000095-87-4 | 2,5-Dimethylphenol | |
| 111. | 16360 | 000576-26-1 | 2,6-Dimethylphenol | |
| 112. | 16390 | 000126-30-7 | 2,2-Dimethyl-propan-1,3-diol | |
| 113. | 16450 | 000646-06-0 | 1,3-Dioxolane | |
| 114. | 16510 | 000138-86-3 | Dipentene | |
| 115. | 16540 | 000102-09-0 | Diphenyl carbonate | |
| 116. | 16690 | 001321-74-0 | Divinylbenzene | |
| 117. | 16697 | 000693-23-2 | Dodecanedioic acid | |
| 118. | 16719 | 003813-52-3 | Endomethylenetetra-hydrophthalic acid | |
| 119. | 16900 | 013036-41-4 | *N*-(Ethoxymethyl)-acrylamide | |
| 120. | 17040 | 000149-57-5 | 2-Ethylhexanoic acid | |
| 121. | 17050 | 000104-76-7 | 2-Ethylhexan-1-ol | |
| 122. | 17110 | 016219-75-3 | 5-Ethylidene-bicyclo-[2.2.1] hept-2-ene | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 123. | 17116 | 005877-42-9 | 4-Ethyloct-1-yn-3-ol | |
| 124. | 17150 | 000078-27-3 | 1-Ethynylcyclo-hexanol | |
| 125. | 17305 | 000141-02-6 | Fumaric acid, bis(2-ethylhexyl ester) | |
| 126. | 17320 | 002807-54-7 | Fumaric acid, diallyl ester | |
| 127. | 17350 | 000105-75-9 | Fumaric acid, dibutyl ester | |
| 128. | 17380 | 000623-91-6 | Fumaric acid, diethyl ester | |
| 129. | 17398 | 007283-68-3 | Fumaric acid, dioctadecyl ester | |
| 130. | 17800 | | Glucosides obtained from glucose and pentaerythritol | |
| 131. | 17830 | | Glucosides obtained from glucose and polyethylene-glycol (molecular weight greater than 200) | |
| 132. | 17860 | | Glucosides obtained from glucose and polypropylene-glycol (molecular weight greater than 400) | |
| 133. | 18220 | 068564-88-5 | *N*-Hepty-laminoundecanoic acid | |
| 134. | 18370 | 000592-45-0 | Hexa-1,4-diene | |
| 135. | 18400 | 000592-42-7 | Hexa-1,5-diene | |
| 136. | 18436 | 001687-30-5 | Hexahydrophthalic acid | |
| 137. | 18441 | 000085-42-7 | Hexahydrophthalic anhydride | |
| 138. | 18490 | 015511-81-6 | Hexamethylene-diamine adipate | |
| 139. | 18610 | 006422-99-7 | Hexamethylene-diamine sebacate | |
| 140. | 18700 | 000629-11-8 | Hexan-1,6-diol | |
| 141. | 18820 | 000592-41-6 | Hex-l-ene | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 142. | 18850 | 000107-41-5 | Hexyleneglycol | |
| 143. | 18865 | 003031-66-1 | Hex-3-yn-2,5-diol | |
| 144. | 18905 | 002628-17-3 | 4-Hydroxystyrene | |
| 145. | 18970 | 000078-83-1 | Isobutanol | |
| 146. | 19030 | 016669-59-3 | *N*-(Isobutoxy-methyl) acrylamide | |
| 147. | 19060 | 000109-53-5 | Isobutyl vinyl ether | |
| 148. | 19090 | 000078-84-2 | Isobutyraldehyde | |
| 149. | 19120 | 025339-17-7 | Isodecanol | |
| 150. | 19130 | 026896-18-4 | Isononanoic acid | |
| 151. | 19140 | 026952-21-6 | Isooctanol | |
| 152. | 19150 | 000121-91-5 | Isophthalic acid | |
| 153. | 19180 | 000099-63-8 | Isophthalic acid dichloride | |
| 154. | 19210 | 001459-93-4 | Isophthalic acid, dimethyl ester | |
| 155. | As item 200 | 000078-79-5 | Isoprene | |
| 156. | 19270 | 000097-65-4 | Itaconic acid | |
| 157. | 19480 | 002146-71-6 | Lauric acid, vinyl ester | |
| 158. | 19490 | 000947-04-6 | Laurolactam | |
| 159. | 19570 | 000999-21-3 | Maleic acid, diallyl ester | |
| 160. | 19600 | 000105-76-0 | Maleic acid, dibutyl ester | |
| 161. | 19660 | 000141-05-9 | Maleic acid, diethyl ester | |
| 162. | 19690 | 014234-82-3 | Maleic acid, diisobutyl ester | |
| 163. | 19720 | 001330-76-3 | Maleic acid, diisooctyl ester | |
| 164. | 19750 | 000624-48-6 | Maleic acid, dimethyl ester | |
| 165. | 19915 | 000925-21-3 | Maleic acid, monobutyl ester | |
| 166. | 19936 | 007423-42-9 | Maleic acid, mono(2-ethylhexyl) ester | |
| 167. | 19990 | 000079-39-0 | Methacrylamide | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 168. | 20050 | 000096-05-9 | Methacrylic acid, allyl ester | |
| 169. | 20080 | 002495-37-6 | Methacrylic acid, benzyl ester | |
| 170. | 20095 | 046729-07-1 | Methacrylic acid, 4-*tert*.-butylcyclohexyl ester | |
| 171. | 20200 | 001888-94-4 | Methacrylic acid, 2-chloroethyl ester | |
| 172. | 20260 | 000101-43-9 | Methacrylic acid, cyclohexyl ester | |
| 173. | 20320 | 003179-47-3 | Methacrylic acid, decyl ester | |
| 174. | 20380 | 001189-08-8 | Methacrylic acid, diester with butan-1,3-diol | |
| 175. | 20410 | 002082-81-7 | Methacrylic acid, diester with butan-1,4-diol | |
| 176. | 20440 | 000097-90-5 | Methacrylic acid, diester with ethyleneglycol | |
| 177. | 20455 | 006606-59-3 | Methacrylic acid, diester with hexan-1,6-diol | |
| 178. | 20470 | 025852-47-5 | Methacrylic acid, diester with polyethyleneglycol | |
| 179. | 20530 | 002867-47-2 | Methacrylic acid, 2-(dimethylamino)-ethyl ester | |
| 180. | 20560 | 000142-90-5 | Methacrylic acid, dodecyl ester | |
| 181. | 20590 | 000106-91-2 | Methacrylic acid, 2,3-epoxypropyl ester | As item 30. |
| 182. | 20740 | 039670-09-2 | Methacrylic acid, ester with ethoxy-triethyleneglycol | |
| 183. | 20830 | | Methacrylic acid, esters with propan-1,2-diol | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 184. | 20920 | 000688-84-6 | Methacrylic acid, 2-ethylhexyl ester | |
| 185. | 20945 | 004664-49-7 | Methacrylic acid, 2-hydroxyisopropyl ester (= methacrylic acid, 2-hydroxy-1-methylethyl ester) | |
| 186. | 20950 | 000923-26-2 | Methacrylic acid, 2-hydroxypropyl ester | |
| 187. | 20965 | 002761-09-3 | Methacrylic acid, 3-hydroxypropyl ester | |
| 188. | 20980 | 007534-94-3 | Methacrylic acid, isobornyl ester | |
| 189. | 21040 | 029964-84-9 | Methacrylic acid, isodecyl ester | |
| 190. | 21070 | 028675-80-1 | Methacrylic acid, isooctyl ester | |
| 191. | 21115 | 000816-74-0 | Methacrylic acid, methallyl ester | |
| 192. | 21170 | 000997-46-6 | Methacrylic acid, monoester with butan-1,4-diol | |
| 193. | 21220 | 032360-05-7 | Methacrylic acid, octadecyl ester | |
| 194. | 21250 | 002157-01-9 | Methacrylic acid, *n*-octyl ester | |
| 195. | 21280 | 002177-70-0 | Methacrylic acid, phenyl ester | |
| 196. | 21370 | 010595-80-9 | Methacrylic acid, 2-sulphoethyl ester | |
| 197. | 21400 | 054276-35-6 | Methacrylic acid, sulphopropyl ester | |
| 198. | 21430 | 004245-37-8 | Methacrylic acid, vinyl ester | |
| 199. | 21520 | 001561-92-8 | Methallylsulphonic acid, sodium salt | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 200. | 21640 | 000078-79-5 | 2-Methylbut-1,3-diene | |
| 201. | 21670 | 000563-46-2 | 2-Methylbut-1-ene | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 202. | 21730 | 000563-45-1 | 3-Methylbut-1-ene | |
| 203. | 21733 | 000115-19-5 | 2-Methylbut-3-yn-2-ol | |
| 204. | 21736 | 002549-61-3 | *alpha*-Methyl-*epsilon*-caprolactone | |
| 205. | 21739 | 002549-60-2 | *beta*-Methyl-*epsilon*-caprolactone | |
| 206. | 21742 | 002549-58-8 | *delta*-Methyl-*epsilon*-caprolactone | |
| 207. | 21745 | 002549-59-9 | *epsilon*-Methyl-*epsilon*-caprolactone | |
| 208. | 21748 | 002549-42-0 | *gamma*-Methyl-*epsilon*-caprolactone | |
| 209. | 21760 | 000694-91-7 | 5-Methylenebicyclo-[2.2.1] hept-2-ene | |
| 210. | As item 71 | 000505-65-7 | 1,4(Methylene-dioxy)butane | |
| 211. | 21837 | 001116-90-1 | 4-methylhex-1,4-diene | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.05 mg/kg). |
| 212. | 21850 | 000095-71-6 | Methylhydro-quinone | |
| 213. | 21880 | 000717-27-1 | Methylhydro-quinone diacetate | |
| 214. | 21970 | 000923-02-4 | *N*-Methylolmeth-acrylamide | |
| 215. | 22210 | 000098-83-9 | *alpha*-Methyl-styrene | |
| 216. | 22240 | 000622-97-9 | *p*-Methylstyrene | |
| 217. | 22270 | 000107-25-5 | Methyl vinyl ether | |
| 218. | 22360 | 001141-38-4 | 2,6-Naphtalene-dicarboxylic acid | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 219. | As item 112 | 000126-30-7 | Neopentylglycol | |
| 220. | 22428 | 051000-52-3 | Neodecanoic acid, vinyl ester | |
| 221. | 22465 | 000112-05-0 | Nonanoic acid | |
| 222. | 22540 | 000104-40-5 | 4-Nonylphenol | |
| 223. | 13180 (also used for bicyclo [2.2.1] hept-2-ene) | 000498-66-8 | Norbornene | As item 39 on Part I Section C. |
| 224. | 22585 | 003710-30-3 | Octa-1,7-diene | |
| 225. | 22690 | 001806-26-4 | 4-Octylphenol | |
| 226. | 22720 | 000140-66-9 | 4-*tert*.-Octylphenol | |
| 227. | 22811 | 000591-93-5 | Pent-1,4-diene | |
| 228. | 22842 | 002590-16-1 | Pentaerythritol diallyl ether | |
| 229. | 22858 | 005343-92-0 | Pentan-1,2-diol | |
| 230. | 22861 | 000111-29-5 | Pentan-1.5-diol | |
| 231. | 22900 | 000109-67-1 | Pent-1-ene | |
| 232. | 22901 | 000109-68-2 | Pent-2-ene | |
| 233. | 22932 | 001187-93-5 | Perfluoromethyl perfluorovinyl ether | |
| 234. | 22935 | 003823-94-7 | Perfluoromethyl vinyl ether | |
| 235. | 22937 | 001623-05-8 | Perfluoropropyl perfluorovinyl ether | |
| 236. | 22940 | 006996-01-06 | Perfluoropropyl vinyl ether | |
| 237. | 23140 | 000092-69-3 | 4-Phenylphenol | |
| 239. | 23530 | 025190-06-1 | Poly(1,4-butylene-glycol) (molecular weight greater than 1000) | |
| 240. | 23770 | 000504-63-2 | Propan-1,3-diol | |
| 241. | 23920 | 000105-38-4 | Propionic acid, vinyl ester | |
| 242. | 24370 | 000106-79-6 | Sebacic acid, dimethyl ester | |
| 243. | 24560 | 000111-63-7 | Stearic acid, vinyl ester | |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 244. | 24760 | 026914-43-2 | Styrenesulphonic acid | |
| 245. | 24940 | 000100-20-9 | Terephthalic acid dichloride | |
| 246. | 25030 | 016646-44-9 | Tetra(allyloxy) ethane | |
| 247. | 25120 | 000116-14-3 | Tetrafluoroethylene | |
| 248. | 25158 | 000088-98-2 | 1,2,3,6-Tetrahydrophthalic acid | |
| 249. | 25161 | 000085-43-8 | 1,2,3,6-Tetrahydrophthalic anhydride | |
| 250. | 25300 | 000088-19-7 | *o*-Toluenesulphonamide | |
| 251. | 25380 | | Trialkyl(C5-C15) acetic acid, vinyl ester (= vinyl versatate) | |
| 252. | 25390 | 000101-37-1 | Triallyl cyanurate | |
| 253. | 25450 | 026896-48-0 | Tricyclodecanedimethanol | |
| 254. | 25480 | 000102-71-6 | Triethanolamine | |
| 255. | 25540 | 000528-44-9 | Trimellitic acid | The quantity of this substance alone or together with item 256 in the finished plastic material or article shall not exceed 5 mg/kg. |
| 256. | 25550 | 000552-30-7 | Trimellitic anhydride | The quantity of this substance alone or together with item 255 in the finished plastic material or article shall not exceed 5 mg/kg (expressed as trimellitic acid). |
| 257. | 25630 | 037275-47-1 | 1,1,1-Trimethylolpropane diacrylate | |
| 258. | 25645 | 000682-09-7 | 1,1,1-Trimethylolpropane diallyl ether | |
| 259. | 25780 | 025723-16-4 | 1,1,1-Trimethylolpropane, propoxylated | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 260. | 25810 | 015625-89-5 | 1,1,1-Trimethylol-propane triacrylate | |
| 261. | 25840 | 003290-92-4 | 1,1,1-Trimethylol-propane trimethacrylate | |
| 262. | 25900 | 000110-88-3 | Trioxane | |
| 263. | As item 254 | 000102-71-6 | Tris(2-hydroxy-ethyl)amine | |
| 264. | 25930 | 001067-53-4 | Tris(2-methoxy-ethoxy)-vinylsilane | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 265. | 26140 | 000075-38-7 | Vinylidene fluoride | The specific migration of this substance shall be not detectable (when measured by a method with a limit of detection of 0.05 mg/kg). |
| 266. | 26170 | 003195-78-6 | *N*-Vinyl-*N*-methyl-acetamide | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 267. | 26200 | 002867-48-3 | *N*-Vinyl-*N*-methyl-formamide | |
| 268. | 26230 | 000088-12-0 | Vinylpyrrolidone | |
| 269. | 26260 | 001184-84-5 | Vinylsulphonic acid | |
| 270. | 26290 | 025013-15-4 | Vinyltoluene | |
| 271. | As item 216 | 000622-97-9 | *p*-Vinyltoluene | |
| 272. | 26320 | 002768-02-7 | Vinyltrimethoxy-silane | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 273. | As item 109 | 000105-67-9 | *m*-Xylenol | |
| 274. | As item 108 | 000526-75-0 | *o*-Xylenol | |
| 275. | As item 110 | 000095-87-4 | *p*-Xylenol | |

SECTION C

**Monomers authorised until 1st April 1995**

| *Item* | 1 *PM/REF. No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 1. | 10180 | 000556-08-1 | *p*-(Acetylamino) benzoic acid | |
| 2. | 10240 | | Acids, aliphatic, dicarboxylic, esters with alcohols, aliphatic, monohydric | |
| 3. | 10270 | | Acids, aliphatic, dicarboxylic (C3-C12), esters with alcohols, unsaturated (C3-C18) | |
| 4. | 10300 | | Acids, aliphatic, dicarboxylic, saturated (C4-C18) | |
| 5. | 10330 | | Acids, aliphatic, dicarboxylic, unsaturated (C4-C12) | |
| 6. | 10360 | | Acids, aliphatic, discarboxylic, unsaturated, esters with polyethylene-glycol | |
| 7. | 10390 | | Acids, aliphatic, dicarboxylic, unsaturated, esters with polypropyleneglycol | |
| 8. | 10420 | | Acids, aliphatic, mono- and dicarboxylic (C2-C20), vinyl esters | |
| 9. | 10450 | | Acids, aliphatic, monocarboxylic (C3-C12), esters with alcohols, unsaturated (C3-C18) | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 10. | 10540 | | Acids, aliphatic, monocarboxylic, unsaturated (C3-C8), esters with alcohols, aliphatic, monohydric, saturated (C2-C12) | |
| 11. | 10570 | | Acids, aliphatic, monocarboxylic, unsaturated, esters with poly-propyleneglycol | |
| 12. | 10630 | 000079-06-1 | Acrylamide | |
| 13. | 10870 | 002206-89-5 | Acrylic acid, 2-chloroethyl ester | |
| 14. | 10900 | | Acrylic acid, cyclohexyl-aminoethyl ester | |
| 15. | 10960 | 016868-13-6 | Acrylic acid, cyclopentyl ester | |
| 16. | 11290 | | Acrylic acid, esters with alcohols, aliphatic, monohydric, saturated (C1-C21) | |
| 17. | 11320 | | Acrylic acid, esters with alcohols, aliphatic, monohydric, unsaturated (C4-C18) | |
| 18. | 11350 | | Acrylic acid, esters with alcohols, aliphatic, polyhydric (C2-C21) | |
| 19. | 11380 | | Acrylic acid, esters with etheralcohols | |
| 20. | 11410 | | Acrylic acid, esters with glycolethers obtained from mono- and/or diglycols with alcohols, aliphatic, monohydric (C1-C18) | |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 21. | 11440 | 044992-01-0 | Acrylic acid, ester with trimethylethanol-ammonium chloride | |
| 22. | 11920 | 005048-82-8 | Acrylic acid, phenyl-aminoethyl ester | |
| 23. | 11950 | 000937-41-7 | Acrylic acid, phenyl ester | |
| 24. | 12070 | 002177-18-6 | Acrylic acid, vinyl ester | |
| 25. | 12400 | | Alcohols, aliphatic, monohydric, unsaturated (up to C18) | |
| 26. | 12430 | | Alcohols, aliphatic, polyhydric (up to C18) | |
| 27. | 12460 | | Alcohols, cycloaliphatic, mono- and/or polyhydric, substituted (up to C18) | |
| 28. | 12490 | | Aldehydes (C4) | |
| 29. | 12520 | | Alkadienes | |
| 30. | 12550 | | *n*-Alkenes (up to C16) | |
| 31. | 12580 | | *p*-Alkyl (C4-C9) phenols | |
| 32. | 12670 | 002855-13-2 | 1-Amino-3-aminomethyl-3,5,5-trimethyl-cyclohexane | |
| 33. | 12730 | 000060-32-2 | 6-Aminocaproic acid | |
| 34. | 12760 | | *omega*-Amino-carboxylic acids, aliphatic, linear (C6-C12) | |
| 35. | 12880 | 000123-98-8 | Azelaic acid dichloride | |
| 36. | 12940 | 004080-88-0 | Azelaic acid, diphenyl ester | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 37. | 13030 | 000539-48-0 | 1,4-Benzenedimethanamine | |
| 38. | 13120 | 000769-78-8 | Benzoic acid, vinyl ester | |
| 39. | 13180 | 000498-66-8 | Bicyclo[2.2.1]hept-2-ene | |
| 40. | 13240 | 003377-24-0 | 2,2-Bis(4-aminocyclohexyl)-propane | |
| 41. | 13300 | 038050-97-4 | 1,4-Bis(4′,4′-dihydroxytriphenylmethyl)benzene | |
| 42. | 13330 | | Bis(2-hydroxyethyl) ether of hydroquinone and its condensation products with propylene oxide | |
| 43. | 13360 | 001620-68-4 | 2,6-Bis(2-hydroxy-5-methylbenzyl)-4-methyl-phenol | |
| 44. | 13420 | 000843-55-0 | 1,1-Bis(4-hydroxyphenyl)-cyclohexane | |
| 45. | 13450 | 000125-13-3 | 3,3-Bis(4-hydroxyphenyl)-2-indolinone | |
| 46. | 13570 | 000141-07-1 | 1,3-Bis(methoxymethyl)-urea | |
| 47. | 13930 | 006117-91-5 | But-2-en-1-ol | |
| 48. | 13990 | 005153-77-5 | *N*-(Butoxymethyl) methacrylamide | |
| 49. | 14050 | 000111-34-2 | Butyl vinyl ether | |
| 50. | 14080 | 000926-02-3 | *tert.*-Butyl vinyl ether | |
| 51. | 14290 | | Caprolactone, substituted | |
| 52. | 14440 | 064147-40-6 | Castor oil, dehydrated | |
| 53. | 14470 | 008001-78-3 | Castor oil, hydrogenated | |
| 54. | 14590 | 000615-67-8 | Chlorohydroquinone | |
| 55. | 14620 | 057981-99-4 | Chlorohydroquinone diacetate | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 56. | 14830 | | Crotonic acid, esters with alcohols, mono- and polyhydric | |
| 57. | 14860 | | Cycloalkenes | |
| 58. | 14920 | 002842-38-8 | 2-(Cyclohexy-lamino)-ethanol | |
| 59. | 15010 | 001131-60-8 | *p*-Cyclohexylphenol | |
| 60. | 15040 | 000542-92-7 | Cyclopenta-1,3-diene | |
| 61. | 15160 | 000765-05-9 | Decyl vinyl ether | |
| 62. | 15190 | | Diamines, aliphatic, linear (C2-C12) | |
| 63. | 15430 | 003749-77-7 | 4,4′-Dicarboxy-diphenoxy-butane | |
| 64. | 15460 | 003753-05-7 | 4,4′-Dicarboxy-diphenoxy-ethane | |
| 65. | 15520 | 004919-48-6 | 4,4′-Dicarboxy-diphenyl sulphide | |
| 66. | 15550 | 002449-35-6 | 4,4′-Dicarboxy-diphenyl sulphone | |
| 67. | 15640 | 000156-59-2 | *cis*-1,2-Dichloro-ethylene | |
| 68. | 15670 | 000156-60-5 | *trans*-1,2-Dichloro-ethylene | |
| 69. | 16030 | 001965-09-9 | 4,4′-Dihydroxy-diphenyl ether | |
| 70. | 16060 | 002664-63-3 | 4,4′-Dihydroxy-diphenyl sulphide | |
| 71. | 16420 | 000123-91-1 | Dioxane | |
| 72. | 16720 | 000826-62-0 | Endomethylenetetra-hydrophthalic anhydride | |
| 73. | 16810 | | Ether alcohols | |
| 74. | 16840 | | Ethers of *N*-methylolacryl-amide | |
| 75. | 16870 | | Ethers of *N*-methylol-methacrylamide | |
| 76. | 16930 | 000075-00-3 | Ethyl chloride | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 77. | 17080 | 000103-44-6 | 2-Ethylhexyl vinyl ether | |
| 78. | 17140 | 000109-92-2 | Ethyl vinyl ether | |
| 79. | 17410 | | Fumaric acid, esters with alcohols, aliphatic, monohydric, saturated (C1-C18) | |
| 80. | 17440 | | Fumaric acid, esters with alcohols, aliphatic, monohydric, unsaturated (C1-C18) | |
| 81. | 17470 | | Fumaric acid, esters with alcohols, polyhydric | |
| 82. | 17500 | 000098-01-0 | Furfural | |
| 83. | 17560 | | Glucosides obtained from glucose and butan-1,3-diol | |
| 84. | 17590 | | Glucosides obtained from glucose and butan-1,4-diol | |
| 85. | 17620 | | Glucosides obtained from glucose and diethylene-glycol | |
| 86. | 17650 | | Glucosides obtained from glucose and 2,2-dimethyl-propan-1,3-diol | |
| 87. | 17680 | | Glucosides obtained from glucose and ethyleneglycol | |
| 88. | 17710 | | Glucosides obtained from glucose and glycerol | |
| 89. | 17740 | | Glucosides obtained from glucose and hexan-1,6-diol | |
| 90. | 17770 | | Glucosides obtained from glucose and hexan-1,2,6-triol | |

| *Item* | 1 *PM/REF No.* | 2 *CAS No.* | 3 *Name* | 4 *Restrictions* |
|---|---|---|---|---|
| 91. | 17890 | | Glucosides obtained from glucose and propanediol | |
| 92. | 17920 | | Glucosides obtained from glucose and sorbitol | |
| 93. | 17950 | | Glucosides obtained from glucose and sucrose | |
| 94. | 17980 | | Glucosides obtained from glucose and 1,1,1-trimethylol-propane | |
| 95. | 18040 | 029733-18-4 | Glutaric acid, diisodecyl ester | |
| 96. | 18130 | 004371-64-6 | 1,1-Heptadecanedi-carboxylic acid | |
| 97. | 18160 | 025339-56-4 | Heptene | |
| 98. | 18190 | 000592-76-7 | Hep-1-ene | |
| 99. | 18250 | 000115-28-6 | Hexachloroen-domethylenetetra-hydrophthalic acid | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 100. | 18280 | 000115-27-5 | Hexachloroendo-methylenetetra-hydrophthalic anhydride | |
| 101. | 18340 | 000822-28-6 | Hexadecyl vinyl ether | |
| 102. | 18430 | 000116-15-4 | Hexafluoro-propylene | |
| 103. | 18520 | 038775-37-0 | Hexamethylene-diamine azelate | |
| 104. | 18550 | | Hexamethylene-diamine dodecanedicar-boxylate | |
| 105. | 18580 | | Hexamethy-lenediamine heptadecanedicar-boxylate | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 106. | 18670 | 000100-97-0 | Hexamethylene-tetramine | |
| 107. | 18730 | 002935-44-6 | Hexan-2,5-diol | |
| 108. | 18760 | 000106-69-4 | Hexan-1,2,6-triol | |
| 109. | 18790 | 025264-93-1 | Hexane | |
| 110. | 18910 | 000288-32-4 | Imidazole | |
| 111. | 18940 | 000095-13-6 | Indene | |
| 112. | 19240 | 000744-45-6 | Isophthalic acid, diphenyl ester | |
| 113. | 19300 | 002155-60-4 | Itaconic acid, dibutyl ester | |
| 114. | 19330 | 007748-43-8 | Itaconic acid, 2,3-epoxypropyl diester | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 115. | 19360 | | Itaconic acid, 2,3-epoxypropyl monoester | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 116. | 19390 | | Itaconic acid, esters with alcohols, aliphatic, monohydric, saturated (C1-C18) | |
| 117. | 19420 | | Itaconic acid, esters with alcohols, polyhydric | |
| 118. | 19450 | | Lactams of *omega*-aminocarboxylic acids, aliphatic, linear (C7-C12) | |
| 119. | 19630 | 071550-61-3 | Maleic acid, diester with propan-1,2-diol | |
| 120. | 19780 | 002915-53-9 | Maleic acid, dioctyl ester | |
| 121. | 19810 | | Maleic acid, esters with alcohols, aliphatic, saturated (C1-C18) | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 122. | 19840 | | Maleic acid, esters with alcohols, polyhydric | |
| 123. | 19870 | | Maleic acid, ester with butan-1,3-diol | |
| 124. | 19900 | 002424-58-0 | Maleic acid, monoallyl ester | |
| 125. | 19930 | | Maleic acid, monoesters with alcohols, aliphatic, monohydric, unsaturated (C3-C18) | |
| 126. | 20230 | | Methacrylic acid, cyclohexy-laminoethyl ester | |
| 127. | 20290 | 016868-14-7 | Methacrylic acid, cyclopentyl ester | |
| 128. | 20350 | | Methacrylic acid, (di-*tert.*-butylamino)ethyl ester | |
| 129. | 20500 | 000105-16-8 | Methacrylic acid, 2-(diethylamino)ethyl ester | |
| 130. | 20620 | | Methacrylic acid, esters with alcohols, aliphatic, monohydric, saturated (C1-C21) | |
| 131. | 20650 | | Methacrylic acid, esters with alcohols, aliphatic, monohydric, unsaturated (C4-C18) | |
| 132. | 20680 | | Methacrylic acid, esters with alcohols, polyhydric (C2-C21) | |
| 133. | 20710 | | Methacrylic acid, esters with etheralcohols | |

| Item | 1 PM/REF No. | 2 CAS No. | 3 Name | 4 Restrictions |
|---|---|---|---|---|
| 134. | 20770 | | Methacrylic acid, esters with glycolethers obtained from mono- and/or diglycols with alcohols, aliphatic, monohydric (C1-C18) | |
| 135. | 20800 | 024493-59-2 | Methacrylic acid, ester with methoxy-triethyleneglycol | |
| 136. | 20860 | | Methacrylic acid, ester with trimethyl-ethanol-ammonium chloride | |
| 137. | 21160 | | Methacrylic acid, monoester with butan-1,3-diol | |
| 138. | 21310 | 003683-12-3 | Methacrylic acid, phenylethyl ester | |
| 139. | 21580 | 003644-11-9 | *N*-(Methoxymethyl)-acrylamide | |
| 140. | 21610 | 003644-12-0 | *N*-(Methoxymethyl)-methacrylamide | |
| 141. | 21700 | 000513-35-9 | 2-Methylbut-2-ene | |
| 142. | 21790 | 000110-26-9 | Methylenebisacry-lamide | |
| 143. | 21820 | 013093-19-1 | Methylenebiscapro-lactam | |
| 144. | 21910 | 000814-78-8 | Methyl isopropenyl ketone | |
| 145. | 21940 | 000924-42-5 | *N*-Methylolacry-lamide | |
| 146. | 22000 | 001118-58-7 | 2-Methylpent-1,3-diene | |
| 147. | 22030 | 001115-08-8 | 3-Methylpent-1,4-diene | |
| 148. | 22060 | 000926-56-7 | 4-Methylpent-1,3-diene | |
| 149. | 22090 | 000763-29-1 | 2-Methylpent-1-ene | |
| 150. | 22120 | 000760-20-3 | 3-Methylpent-1-ene | |
| 151. | 22150 | 000691-37-2 | 4-Methylpent-1-ene | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 152. | 22180 | 004461-48-7 | 4-Methylpent-2-ene | |
| 153. | 22300 | 000078-94-4 | Methyl vinyl ketone | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 154. | 22330 | 001822-74-8 | Methyl vinyl thioether | |
| 155. | 22510 | 027215-95-8 | Nonene | |
| 156. | 22580 | 000930-02-9 | Octadecyl vinyl ether | |
| 157. | 22630 | 025377-83-7 | Octene (except oct-1-ene) | |
| 158. | 22750 | 000929-62-4 | Octyl vinyl ether | |
| 159. | 22810 | 000504-60-9 | Pent-1,3-diene | |
| 160. | 22930 | | Perfluoroalkyl (C1-C3)vinyl ethers | |
| 161. | 22990 | | Phenols, mono- and dihydric, alkoxylated or hydrogenated | |
| 162. | 23020 | 028994-41-4 | *alpha*-Phenyl-*o*-cresol | |
| 163. | 23080 | 001079-21-6 | Phenylhydroquinone | |
| 164. | 23110 | 058244-28-3 | Phenylhydroquinone diacetate | |
| 165. | 23230 | 000131-17-9 | Phthalic acid, diallyl ester | |
| 166. | 23260 | 000088-95-9 | *o*-Phthalic acid dichloride | |
| 167. | 23290 | | Phthalic acids, halogenated derivatives | |
| 168. | 23320 | | Phthalic acids, hydrogenated | |
| 169. | 23350 | | Phthalic acids, hydrogenated, substituted, endosubstituted, and their halogenated derivatives | |
| 170. | 23410 | | Phthalic anhydride, hydrogenated | |

| Item | 1<br>PM/REF No. | 2<br>CAS No. | 3<br>Name | 4<br>Restrictions |
|---|---|---|---|---|
| 171. | 23440 | 000111-16-0 | Pimelic acid | |
| 172. | 23560 | | Polyethers based on ethylene oxide, propylene oxide and/or tetrahydrofuran, containing free hydroxyl groups | |
| 173. | 23620 | | Polyols derived from phenols and bisphenols, hydrogenated and/or condensed with epoxyalkanes and/or arylepoxyalkanes possibly halogenated, alkoxylated, aryloxylated | |
| 174. | 23680 | 009002-89-5 | Polyvinylalcohols | |
| 175. | 23710 | 063148-65-2 | Polyvinylbutyrals | |
| 176. | 24040 | 000764-47-6 | Propyl vinyl ether | |
| 177. | 24220 | 009006-03-5 | Rubber, chlorinated | |
| 178. | 24310 | 000111-19-3 | Sebacic acid, dichloride | |
| 179. | 24340 | 002432-89-5 | Sebacic acid, didecyl ester | |
| 180. | 24400 | 002918-18-5 | Sebacic acid, diphenyl ester | |
| 181. | 24640 | | Styrene, substituted by alkyl groups (alpha) | |
| 182. | 24670 | | Styrene, substituted in the benzene ring | |
| 183. | 24700 | | Styrene, substituted by halogens (alpha or beta) | |
| 184. | 24730 | | Styrene, substituted in the vinyl group | |
| 185. | 24790 | 000505-48-6 | Suberic acid | |
| 186. | 25000 | 001539-04-4 | Terephthalic acid, diphenyl ester | |
| 187. | 25060 | 000632-58-6 | Tetrachlorophthalic acid | |

| *Item* | 1<br>*PM/REF No.* | 2<br>*CAS No.* | 3<br>*Name* | 4<br>*Restrictions* |
|---|---|---|---|---|
| 188. | 25330 | 000070-55-3 | *p*Toluenesulphonamide | |
| 189. | 25570 | 000067-48-1 | Trimethylethanolammonium chloride | |
| 190. | 25660 | 019727-16-3 | 1,1,1-Trimethylolpropane dimethacrylate | |
| 191. | 25690 | | 1,1,1-Trimethylolpropane maleates | |
| 192. | 25720 | 007024-08-0 | 1,1,1-Trimethylolpropane monoacrylate | |
| 193. | 25750 | 007024-09-1 | 1,1,1-Trimethylolpropane monomethacrylate | |
| 194. | 25870 | 000107-39-1 | 2,4,4-Trimethylpent-1-ene | |
| 195. | 25990 | 000689-97-4 | Vinylacetylene | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 196. | 26020 | 001484-13-5 | *N*-Vinylcarbazole | The quantity of this substance in the finished plastic material or article shall not exceed 5 mg/kg. |
| 197. | 26080 | | Vinyl ethers of alcohols, aliphatic, monohydric, saturated (C2-C18) | |
| 198. | 26140 | 000075-38-7 | Vinylidene fluoride | |

## PART II

### SUPPLEMENTARY

1. In regulation 5 and Part I—

(*a*) the PM/REF No. of any substance is its EEC packaging material reference number,

(*b*) the CAS No. of any substance is its CAS (Chemical Abstracts Service) Registry Number, and

(*c*) the name of any substance is its chemical name,

and to the extent that there is any inconsistency between the CAS No. and the name, the name shall take precedence over the CAS No.

2. If a substance appearing in Part I as an individual compound also falls within a generic term which appears therein, the restriction (if any) applying to that substance shall be that indicated for the individual compound and the entry applying to the generic term shall be treated as varied to such extent (if any) as is necessary therefore.

3.—(1) The items identified in Part I shall be taken to include—

(*a*) substances undergoing polymerisation (which shall be taken to include polycondensation, polyaddition or any other similar process) to manufacture macromolecules,

(*b*) natural or synthetic macromolecular substances used in the manufacture of modified macromolecules, if the momomers required to synthesise them are not so identified, and

(*c*) substances used to modify existing natural or synthetic macromolecular substances.

(2) If a substance identified in Part I is an acid, a phenol or an alcohol and has salts (including double salts) of one or more of the following names (that is to say salts (including double salts) of aluminium, ammonium, calcium, iron, magnesium, potassium, sodium or zinc), then any such salts (including double salts) shall be treated as included in the specification of that substance.

(3) If a substance is identified in Part I as an ... acid, salt and has salts of one or more of the following names (that is to say salts of aluminium, ammonium, calcium, iron, magnesium, potassium, sodium or zinc), then the free acid corresponding to that substance is not treated as included in the specification of that substance.

SCHEDULE 2 Regulation 5

PART I

PROVISIONS APPLICABLE WHEN CHECKING COMPLIANCE WITH THE MIGRATION LIMITS

**A. General provisions**

1. When the results of the migration tests specified in this Schedule are analytically determined the specific gravity of any simulants used shall be assumed to be 1, so that milligrams of any substance released per litre of simulant will correspond numerically to milligrams of that substance released per kilogram of that simulant.

2. Where any migration test specified in this Schedule is carried out on any sample taken from any plastic material or article and the quantities of food or simulant placed in contact with the sample differ from those employed in the actual conditions under which the plastic material or article is used or is to be used, the results obtained should be corrected by applying the following formula:

$$M = \frac{m.a_2}{a_1 \cdot q} \cdot 1000$$

Where:

M is the migration in mg/kg;

m is the mass in mg of substance released by the sample as determined by the migration test;

$a_1$ is the surface area in square decimetres of the sample in contact with the food or simulant during the migration test;

$a_2$ is the surface area in square decimetres of the plastic material or article in actual conditions of use;

q is the quantity in grams of food in contact with the plastic material or article in actual conditions of use.

3.—(1) Subject to sub-paragraph (2), any testing of migration from any plastic material or article shall be carried out on that plastic material or article.

(2) In any case where determination in accordance with sub-paragraph (1) is impracticable, such testing shall be carried out, using either specimens taken from that plastic material or article or, where appropriate, specimens representative of that plastic material or article.

(3) Any sample used for such testing shall be placed in contact with the simulant or food, as the case may be, in a manner representing the contact conditions in actual use, and, for this purpose, the testing shall be carried out in such a way that only those parts of the sample intended to come into contact with food in actual use will be in contact with the simulant or food.

(4) Any migration testing of caps, gaskets, stoppers or similar devices for sealing shall be carried out on these articles by applying them to the containers for which they are intended in a manner which corresponds to the conditions of closing in normal or foreseeable use.

4.—(1) Any sample of a plastic material or article shall be placed in contact with the appropriate simulant or the food for a period and at a temperature which are chosen by reference to the contact conditions in actual use in accordance with the provisions of this Schedule.

(2) At the end of the period referred to in sub-paragraph (1), analytical determination of the total quantity of substances (overall migration), each specific quantity of a substance (specific migration) or, as the case may be, both that total and that specific quantity released by the sample shall be carried out on the simulant or food, as the case may be.

5. Where a plastic material or article is intended to come into repeated contact with food, any migration test shall (subject to paragraph 7) be carried out three times on a single sample in accordance with the conditions laid down in this Schedule using separate samples of the simulant or, as the case may be, food on each occasion, and the level of the migration found in the third test shall be treated as the level relevant to that test.

**B. Special provisions relating to overall migration**

6.—(1) Subject to the following sub-paragraphs any method of analytical determination may be used to prove excess of an overall migration limit in relation to a plastic material or article.

(2) In any proceedings for an offence under regulation 3 comprising excess of an overall migration limit, it shall be a defence for the person charged to prove that—

(*a*) if an aqueous simulant specified in this Schedule had been used, and the analytical determination of the total quantity of substances released by a sample of the plastic material or article tested had been carried out by evaporation of the simulant and weighing of the residue, or

(*b*) if rectified olive oil or any of its substitutes had been used as a simulant and—

(i) a sample of the plastic material or article had been weighed before and after contact with the simulant,

(ii) the simulant absorbed by the sample had been extracted and determined quantitatively,

(iii) the quantity of simulant so found had been subtracted from the weight of the sample measured after contact with the simulant, and

(iv) the difference between the initial and corrected final weights had been determined to represent the overall migration of the sample examined,

there would have been no such excess so determined.

7.—(1) Where a plastic material or article is intended to come into repeated contact with food and it is technically impossible to carry out the test described in paragraph 5, the test shall be so modified as to enable the level of migration occurring during the third such test to be determined and, subject to sub-paragraph (2), such a determination may be used to prove excess of an overall migration limit in relation to a plastic material or article.

(2) In any procedures for an offence under regulation 3 comprising excess of an overall migration limit as determined under sub-paragraph (1), it shall be a defence for the person charged to prove that, if—

(*a*) three identical samples of the plastic material or article had been procured,

(*b*) one of them had been subjected to the appropriate test according with paragraph 4 and the overall migration determined ($M_1$),

(*c*) the second and third samples had been subjected to the same conditions of temperature but the period of contact had been two and three times that specified and overall migration had been determined in each case ($M_2$ and $M_3$, respectively), and

(*d*) the plastic material or article had been deemed to comply with the overall migration limit relevant to it provided that either $M_1$ or $M_3 - M_2$ did not exceed that overall migration limit,

the plastic material or article would not have been deemed to exceed that limit.

8.—(1) Any plastic material or article which exceeds its overall migration limit by an amount not exceeding the analytical tolerance specified in sub-paragraph (2) shall be deemed for the purposes of these Regulations not to exceed its overall migration limit.

(2) The following analytical tolerances shall be applied for limits of overall migration—

(*a*) 20 mg/kg or, as the case may be, 3 milligrams per square decimetre in migration tests using as a simulant rectified olive oil or substitutes,

(*b*) 6 mg/kg or, as the case may be, 1 milligram per square decimetre in migration tests using other simulants referred to in this Schedule.

## PART II

### SIMULANTS TO BE USED IN MIGRATION TESTS

1. Subject to the provisions of this Schedule, the simulants which may be used in migration testing are as follows—

| | |
|---|---|
| Simulant A: | distilled water or water of equivalent quality; |
| Simulant B: | 3% acetic acid (w/v) in aqueous solution; |
| Simulant C: | 15% ethanol (v/v) in aqueous solution; |
| Simulant D: | Rectified olive oil, save that if for technical reasons connected with the method of analysis it is necessary to use a different simulant, rectified olive oil shall be replaced by a mixture of synthetic triglycerides or by sunflower oil. |

2. The particulars of simulant D referred to in paragraph 1 are as hereinafter described:

(*a*) the characteristics of rectified olive oil shall be as follows—

| | |
|---|---|
| Iodine value (Wijs) | = 80 to 88 |
| Refractive index at 25°C | = 1.4665 to 1.4679 |
| Acidity (expressed as % of oleic acid) | = 0.5% maximum |
| Peroxide number (expressed as oxygen milliequivalents per kg of oil) | = 10 maximum |

(*b*) the composition of the synthetic triglycerides mixture shall be as follows—

(i) fatty acid distribution

| No. of C-atoms in fatty acid residue ..... | 6 | 8 | 10 | 12 | 14 | 16 | 18 | others |
|---|---|---|---|---|---|---|---|---|
| GLC area (%) | ~1 | 6-9 | 8-11 | 45-12 | 12-15 | 8-10 | 8-12 | ≦1 |

(ii) purity

| | |
|---|---|
| Content of monoglycerides (enzymatically) | ≦0.2% |
| Content of diglycerides (enzymatically) | ≦2.0% |
| Unsaponifiable matter | ≦0.2% |
| Iodine value (Wijs) | ≦0.1% |
| Acid value | ≦0.1% |
| Water content (K. Fischer) | ≦0.1% |
| Melting point | 28 ± 2°C |

(iii) typical absorption spectrum (thickness of layer: d = 1 cm; Reference: water at 35°C)

| Wavelength (nm) | 290 | 310 | 330 | 350 | 370 | 390 | 430 | 470 | 510 |
|---|---|---|---|---|---|---|---|---|---|
| Transmittance (%) | ~2 | ~15 | ~37 | ~64 | ~80 | ~88 | ~95 | ~97 | ~98 |

At least 10% light transmittance at 310 nm (cell of 1 cm, reference: water at 35°C)

(*c*) characteristics of sunflower oil shall be as follows—

| | |
|---|---|
| Iodine value (Wijs) | = 120 to 145 |
| Refractive index at 20°C | = 1.474 to 1.476 |
| Saponification number | = 188 to 193 |
| Relative density at 20°C | = 0.918 to 0.925 |
| Unsaponifiable matter | = 0.5% to 1.5% |

## PART III

### SPECIFICATION OF SIMULANTS TO BE USED

1.—(1) Subject to the provisions of this Part, capability of migration into food shall be treated for the purposes of these Regulations as being determined by carrying out the migration test described in this Schedule—

(*a*) in any case where a simulant is specified in the Table to this Schedule, either on the simulant or on the food; and

(*b*) in any case where the food is not specified in that table, either on the simulant which corresponds most closely in extractive capacity to the food or on the food.

(2) A simulant is specified in relation to a food for the purposes of this paragraph where 'X' is placed in the column headed by that simulant opposite the food in the Table to this Part of this Schedule, and the Table shall be read in conjunction with the notes thereto and the following paragraphs.

(3) Where more than one simulant is to be used in relation to a migration test, a new sample of the plastic material or article shall be used for each such test.

2. Where, in the Table to this Part, 'X' is followed by an oblique stroke and a figure, the result of any migration test on the simulant shall be divided by the number indicated.

3. Where, in the Table to this Part, the letter 'a' is shown in brackets after the 'X', only one of the two simulants specified shall be used in the migration test, that is to say—

(*a*) if the pH value of the food is higher than 4.5, simulant A shall be used,

(*b*) if the pH value of the food is 4.5 or less, simulant B shall be used.

4. Where a food is listed in the Table to this Part under both a specific and a general heading, the simulant relating to the specific heading is the simulant which falls to be used for the migration test.

TABLE

| *Reference Number* | *Description of food* | *Simulants to be used* A | B | C | D |
|---|---|---|---|---|---|
| 01 | **Beverages** | | | | |
| 01.01 | Non-alcoholic beverages or alcoholic beverages of an alcoholic strength lower than 5% vol.: | | | | |
| | Waters, ciders, fruit or vegetable juices of normal strength or concentrated, musts, fruit nectars, lemonades and mineral waters, syrups, bitters, infusions, coffee, tea, liquid chocolate, beers and other | X(a) | X(a) | | |
| 01.02 | Alcoholic beverages of an alcoholic strength equal to or exceeding 5% vol.: | | | | |
| | Beverages shown under heading 01.01 but with an alcoholic strength equal to or exceeding 5% vol.: | | | | |
| | Wines, spirits and liqueurs | | X(*) | X(**) | |
| 01.03 | Miscellaneous: undenatured ethyl alcohol | | X(*) | X(**) | |
| 02 | **Cereals, cereal products, pastry, biscuits, cakes and other bakers' wares** | | | | |
| 02.01 | Starches | | | | |
| 02.02 | Cereals, unprocessed, puffed, in flakes (including popcorn, cornflakes and the like) | | | | |
| 02.03 | Cereal flour and meal | | | | |
| 02.04 | Macaroni, spaghetti and similar products | | | | |
| 02.05 | Pastry, biscuits, cakes and other bakers' wares, dry: | | | | |
| | A. With fatty substances on the surface | | | | X/5 |
| | B. Other | | | | |

(*) Simulant B shall not be used where the pH is more than 4.5.
(**) This test may be carried out in the case of liquids or beverages of an alcoholic strength exceeding 15% vol. with aqueous solutions of ethanol of a similar strength.

| *Reference Number* | *Description of food* | *Simulants to be used* A | B | C | D |
|---|---|---|---|---|---|
| 02.06 | Pastry, cakes and other bakers' wares, fresh: | | | | |
| | A. With fatty substances on the surface | | | | X/5 |
| | B. Other | X | | | |
| 03 | **Chocolate, sugar and products thereof. Confectionery products** | | | | |
| 03.01 | Chocolate, chocolate-coated products, substitutes and products coated with substitutes | | | | X/5 |
| 03.02 | Confectionery products: | | | | |
| | A. In solid form: | | | | |
| | I. With fatty substances on the surface | | | | X/5 |
| | II. Other | | | | |
| | B. In paste form: | | | | |
| | I. With fatty substances on the surface | | | | X/3 |
| | II. Moist | X | | | |
| 03.03 | Sugar and sugar products | | | | |
| | A. In solid form | | | | |
| | B. Honey and the like | X | | | |
| | C. Molasses and sugar syrups | X | | | |
| 04 | **Fruit, vegetables and products thereof** | | | | |
| 04.01 | Whole fruit, fresh or chilled | | | | |
| 04.02 | Processed fruit: | | | | |
| | A. Dried or dehydrated fruit, whole or in the form of flour or powder | | | | |
| | B. Fruit in the form of chunks, purée or paste | X(a) | X(a) | | |
| | C. Fruit preserves (jams and similar products – whole fruit or chunks or in the form of flour or powder, preserved in a liquid medium): | | | | |

| *Reference Number* | *Description of food* | *Simulants to be used* A | B | C | D |
|---|---|---|---|---|---|
| | I. In an aqueous medium | X(a) | X(a) | | |
| | II. In an oily medium | X(a) | X(a) | | X |
| | III. In an alcoholic medium (≧5% vol.) | | X(*) | X | |
| 04.03 | Nuts (peanuts, chestnuts, almonds, hazelnuts, walnuts, pine kernels and others) | | | | |
| | A. Shelled, dried | | | | |
| | B. Shelled and roasted | | | | X/5(**) |
| | C. In paste or cream form | X | | | X/3(**) |
| 04.04 | Whole vegetables, fresh or chilled | | | | |
| 04.05 | Processed vegetables: | | | | |
| | A. Dried or dehydrated vegetables whole or in the form of flour or powder | | | | |
| | B. Vegetables, cut, in the form of purées | X(a) | X(a) | | |
| | C. Preserved vegetables: | | | | |
| | I. In an aqueous medium | X(a) | X(a) | | |
| | II. In an oily medium | X(a) | X(a) | | X |
| | III. In an alcoholic medium (≧5% vol.) | | X(*) | X | |
| 05 | **Fats and oils** | | | | |
| 05.01 | Animal and vegetable fats and oils, whether natural or treated (including cocoa butter, lard, resolidified butter) | | | | X |
| 05.02 | Margarine, butter and other fats and oils made from water emulsions in oil | | | | X/2 |
| 06 | **Animal products and eggs** | | | | |
| 06.01 | Fish: | | | | |
| | A. Fresh, chilled, salted, smoked | X | | | X/3(**) |
| | B. In the form of paste | X | | | X/3(**) |

(*) Simulant B shall not be used where the pH is more than 4.5.

(**) If it can be demonstrated under regulation 9 or proved by means of an appropriate test that there is to be no fatty contact with the plastic material or article, simulant D shall not be used.

| Reference Number | Description of food | Simulants to be used | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| 06.02 | Crustaceans and molluscs (including oysters, mussels, snails) not naturally protected by their shells | X | | | |
| 06.03 | Meat of all zoological species (including poultry and game): | | | | |
| | A. Fresh, chilled, salted, smoked | X | | | X/4 |
| | B. In the form of paste, creams | X | | | X/4 |
| 06.04 | Processed meat products (ham, salami, bacon and other) | X | | | X/4 |
| 06.05 | Preserved and part-preserved meat and fish: | | | | |
| | A. In an aqueous medium | X(a) | X(a) | | |
| | B. In an oily medium | X(a) | X(a) | | X |
| 06.06 | Eggs not in shell: | | | | |
| | A. Powdered or dried | | | | |
| | B. Other | X | | | |
| 06.07 | Egg yolks: | | | | |
| | A. Liquid | X | | | |
| | B. Powdered or frozen | | | | |
| 06.08 | Dried white of egg | | | | |
| 07 | **Milk products** | | | | |
| 07.01 | Milk: | | | | |
| | A. Whole | X | | | |
| | B. Partly dried | X | | | |
| | C. Skimmed or partly skimmed | X | | | |
| | D. Dried | | | | |
| 07.02 | Fermented milk such as yoghurt, buttermilk and such products in association with fruit and fruit products | | X | | |
| 07.03 | Cream and sour cream | X(a) | X(a) | | |
| 07.04 | Cheeses: | | | | |
| | A. Whole, with rind | | | | |
| | B. Processed cheeses | X(a) | X(a) | | |
| | C. All others | X(a) | X(a) | | X/3(*) |

(*) If it can be demonstrated under regulation 9 or proved by means of an appropriate test that there is to be no fatty contact with the plastic material or article, simulant D shall not be used.

| *Reference Number* | *Description of food* | *Simulants to be used* A | B | C | D |
|---|---|---|---|---|---|
| 07.05 | Rennet: | | | | |
| | A. In liquid or viscous form | X(a) | X(a) | | |
| | B. Powdered or dried | | | | |
| 08 | **Miscellaneous products** | | | | |
| 08.01 | Vinegar | | X | | |
| 08.02 | Fried or roasted foods: | | | | |
| | A. Fried potatoes, fritters and the like | | | | X/5 |
| | B. Of animal origin | | | | X/4 |
| 08.03 | Preparations, for soups, broths in liquid, solid or powder form (extracts, concentrates); homogenized composite food preparations, prepared dishes: | | | | |
| | A. Powdered or dried: | | | | |
| | I. With fatty substances on the surface | | | | X/5 |
| | II. Other | | | | |
| | B. Liquid or paste: | | | | |
| | I. With fatty substances on the surface | X(a) | X(a) | | X/3 |
| | II. Other | X(a) | X(a) | | |
| 08.04 | Yeasts and raising agents: | | | | |
| | A. In paste form | X(a) | X(a) | | |
| | B. Dried | | | | |
| 08.05 | Salt | | | | |
| 08.06 | Sauces: | | | | |
| | A. Without fatty substances on the surface | X(a) | X(a) | | |
| | B. Mayonnaise, sauces derived from mayonnaise, salad creams and other oil in water emulsions | X(a) | X(a) | | X/3 |
| | C. Sauce containing oil and water forming two distinct layers | X(a) | X(a) | | X |
| 08.07 | Mustard (except powdered mustard under heading 08.17) | X(a) | X(a) | | X/3(*) |

(*) If it can be demonstrated under regulation 9 or proved by means of an appropriate test that there is to be no fatty contact with the plastic material or article, simulant D shall not be used.

| *Reference Number* | *Description of food* | *Simulants to be used* A | B | C | D |
|---|---|---|---|---|---|
| 08.08 | Sandwiches, toasted bread and the like containing any kind of foodstuff: | | | | |
| | A. With fatty substances on the surface | | | | X/5 |
| | B. Other | | | | |
| 08.09 | Ice-creams | X | | | |
| 08.10 | Dried foods: | | | | |
| | A. With fatty substances on the surface | | | | X/5 |
| | B. Other | | | | |
| 08.11 | Frozen or deep-frozen foods | | | | |
| 08.12 | Concentrated extracts of an alcoholic strength equal to or exceeding 5% vol. | | X(*) | X | |
| 08.13 | Cocoa: | | | | |
| | A. Cocoa powder | | | | X/5(**) |
| | B. Cocoa paste | | | | X/3(**) |
| 08.14 | Coffee, whether or not roasted, decaffeinated or soluble, coffee substitutes, granulated or powdered | | | | |
| 08.15 | Liquid coffee extracts | X | | | |
| 08.16 | Aromatic herbs and other herbs: | | | | |
| | Camomile, mallow, mint, tea, lime blossom and others | | | | |
| 08.17 | Spices and seasonings in the natural state: | | | | |
| | Cinnamon, cloves, powdered mustard, pepper, vanilla, saffron and other | | | | |

(*) Simulant B shall not be used where the pH is more than 4.5

(**) If it can be demonstrated under regulation 9 or proved by means of an appropriate test that there is to be no fatty contact with the plastic material, simulant D shall not be used

PART IV

TEST CONDITIONS (TIMES AND TEMPERATURES)

1. Subject to paragraph 2—

(*a*) the migration tests shall be carried out, selecting from the times and temperatures specified in the Table to this Part those which correspond most closely to the normal or foreseeable conditions of contact for the plastic material or article being studied;

(*b*) if a plastic material or article is intended to be used successively at short intervals in several of the conditions of contact referred to in column 1 of the table, migration will be determined by subjecting that plastic material or article successively to each corresponding test condition specified in column 2, using the same simulant;

(*c*) where the plastic material or article may in actual use be employed under any conditions of contact time or temperature, the 10-day tests at 40°C and the two-hour tests at 70°C shall be carried out to test migration, except that, where simulant D is used (rectified olive oil or any of its substitutes), only the 10-day test at 40°C shall be carried out.

2. If it is found that carrying out the tests required by paragraph 1 under the conditions specified in the table causes physical or other changes in the plastic material or article, the migration tests shall be carried out under conditions more appropriate to the specific case.

3. The Table to this Part shall be read with the footnotes to it.

TABLE

Test conditions to be shown according to conditions of contact in actual use (times (t) and temperatures (T))

| *Conditions of contact in actual use* | *Test conditions* |
|---|---|
| 1 | 2 |
| 1. **Contact time: t >24 hours** | |
| 1.1. T ≦5°C | 10 days at 5°C |
| 1.2. 5°C <T≦ 40°C[1] | 10 days at 40°C |
| 2. **Contact time: two hours ≦t ≦24 hours** | |
| 2.1. T <5°C | 24 hours at 5°C |
| 2.2. 5°C <T ≦40°C | 24 hours at 40°C |
| 2.3. 40°C <T ≦70°C | 24 hours at 70°C |
| 2.4. 70°C <T ≦100°C | 24 hours at 100°C |
| 3. **Contact time: t <two hours** | |
| 3.1. T ≦5°C | Two hours at 5°C |
| 3.2. 5°C <T ≦40°C | Two hours at 40°C |
| 3.3. 40°C <T ≦70°C | Two hours at 70°C |
| 3.4. 70°C <T ≦100°C | One hour at 100°C* |
| 3.5. 100°C <T ≦121°C[2] | 30 min. at 121°C |
| 3.6. 121°C <T ≦130°C[2] | 30 min. at 130°C |
| 3.7. 130°C <T ≦150°C[2] | 30 min. at 150°C |
| 3.8. T >150°C[2] | 30 min. at 175°C |

[1] For plastic materials in contact with foodstuffs for which a preservation temperature of less than 20°C is specified on the labelling or by law, the test conditions will be 10 days at 20°C.

[2] Use only simulant D at these temperatures, in addition to simulants A, B and C as appropriate, at 100°C or at reflux temperature.

* or reflux temperature.

## EXPLANATORY NOTE

*(This note is not part of the Regulations.)*

These Regulations implement Commission Directive 90/128/EEC (O.J. No. L349, 13.12.90, p. 26) as amended by Commission Directive 92/39/EEC (O.J. No. L168, 23.6.92, p. 21) relating to plastic materials and articles intended to come into contact with foodstuffs, as read with Council Directives 82/711/EEC and 85/572/EEC (O.J. Nos. L297, 23.10.82, p. 26 and L372, 30.12.85, p. 14 respectively) which between them lay down the basic rules necessary, and the list of simulants to be used, for testing migration of certain constituents of plastic materials and articles intended to come into contact with foodstuffs. The Regulations prescribe limits both in relation to content of the materials and articles in question and migration of constituents into food, and the tests by which migration is to be established. The materials and articles to which these Regulations relate are also subject to the Materials and Articles in Contact with Food Regulations (Northern Ireland) 1987.

Plastic materials and articles manufactured before the coming into operation of these Regulations containing certain constituents which by these Regulations can no longer be used in manufacture may be used for the purposes of storage etc and may be sold for such purposes until 1st April 1995 (regulation 11).