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Report Highlights:

On September 25, 2025, China released two Food Contact Materials Standards, including Coatings and Coating Layers for Food Contact Materials and Articles and Silicone Rubber Materials and Products for Use in Contact with Foods. The final standards will enter into force on September 2, 2026. This report provides unofficial translations of the final standards. Stakeholders should conduct their own review of the regulations to assess any market or regulatory effect on their business.

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Report Summary:

On September 25, 2025, the People's Republic of China National Health Commission (NHC) and State Administration for Market Regulation (SAMR) jointly released the following two National Food Safety Standards for food contact materials. The final standards will enter into force on September 2, 2026.

- GB 4806.10-2025: Coatings and Coating Layers for Food Contact Materials and Articles, which will replace previous standard of GB 4806.10-2016. The standard has not been notified to WTO at the time of this report. Please see page 2 for an unofficial translation of the final standard.

- GB 4806.16-2025: Silicone Rubber Materials and Products for Use in Contact with Foods, which will replace previous standard of GB 4806.11-2016. China notified the draft standard to the WTO as G/SPS/N/CHN/1294 on October 25, 2023. Please see FAS GAIN Report CH2023-0168 for more detailed information about the notification. Please see page 62 for an unofficial translation of the final standard.

This report provides an unofficial translation of the final standard. Stakeholders should conduct their own review of the regulations to assess any market or regulatory effect on their business.

BEGIN UNOFFICIAL TRANSLATION

National Food Safety Standard

Coatings and Coating Layers for Food Contact Materials and Articles

Foreword

This standard replaces GB 4806.10-2016 National Food Safety Standard Food Contact Coatings and Coating Layers, as well as the basic ingredients for coatings and coating layers specified in the Announcements No. 14 of 2014, No. 5 of 2016, No. 7 of 2016, No. 13 of 2016, and No. 9 of 2017 of Former National Health and Family Planning Commission; and Announcements No. 3 of 2018, No. 9 of 2018, No. 11 of 2018, No. 15 of 2018, No. 2 of 2019, No. 4 of 2019, No. 6 of 2019, No. 4 of 2020, No. 6 of 2020, No. 9 of 2020, No. 2 of 2021, No. 6 of 2021, No. 9 of 2021, No. 1 of 2022, No. 2 of 2022, No. 5 of 2022, No. 1 of 2023, and No. 3 of 2023 of National Health Commission.

Compared with the above standards and announcements, the main technical changes in this standard are as follows:

— The name of the standard has been modified;

— The scope has been revised;
— The terms and definitions have been revised;
— The basic requirements have been revised;
— The requirements for raw materials have been revised;
— The physical and chemical indicators have been revised;
— The migration test requirements have been revised;
— The labeling requirements have been revised;
— Appendix A has been revised.

1. Scope

This standard applies to coatings and coating layers used for food contact materials and articles.

2. Terms and Definitions

2.1 Coatings and coating layers for food contact materials and articles

Coatings and the resulting coating layers (films) formed that are intended to be applied to food contact materials and articles, designed to be in direct contact with foods or in indirect contact with foods such that their components may migrate into foods.

3. Basic Requirements

3.1 Coatings and coating layers for food contact materials and articles shall comply with the provisions of GB 4806.1.

3.2 Manufacturers of coatings for food contact materials and articles shall control the safety risks of the coating products through formulation design, raw material selection, production process control, and product information transmission.

3.3 Enterprises using coatings for food contact materials and articles shall control the safety risks originating from the coatings by means of packaging design such as seams and edges, adding effective barrier layers, controlling the curing process, and ensuring proper product information transmission. Under conditions where the expected functional effect is achieved, the amount and residue of the coating used shall be minimized as far as possible.

4. Technical Requirements

4.1 Raw material requirements

4.1.1 The use of base materials in coatings and coating layers for food contact materials and articles shall comply with the provisions of Appendix A and related announcements.

4.1.2 The use of additives in coatings and coating layers for food contact materials and articles shall comply with GB 9685 and related announcements.

4.2 Sensory requirements for coatings

The sensory requirements for coatings directly contacting food shall comply with the provisions of Table 1.

Table 1: Sensory Requirements

Item	Requirements
Appearance	Smooth surface, uniform color, free from air bubbles; after immersion, there shall be no cracks, bubbles, or peeling.
Immersion Liquid	The immersion liquid obtained from the migration test shall not show discoloration, turbidity, precipitation, or any deterioration of sensory properties such as abnormal odor.

4.3 Physical and chemical indicators

4.3.1 General physical and chemical indicators

The general physical and chemical indicators for coatings shall comply with the provisions of Table 2.

Table 2: General Physical and Chemical Indicators

Item	Indicator	Test Method
Total migration [a] / (mg/dm²) [b] ≤	10	GB 31604.8
Potassium permanganate consumption [a] / (mg/kg) Water (60°C for 2 hours or boiling for 0.5 hour, then placed at room temperature for 24 hours) [c] ≤	10	GB 31604.2
Heavy metals (as Pb) [a] / (mg/kg) 4% acetic acid (volume fraction) (60°C for 2 hours or boiling for 0.5 hour, then placed at room temperature for 24 hour) [c] ≤	1	GB 31604.9
Total migration of aromatic primary amines [d] / (mg/kg)	Not detectable (limit of detection = 0.01 mg/kg)	GB 31604.52

[a] Applicable only to coatings directly in contact with foods. For coatings indirectly contacting foods, the requirements shall follow the provisions in the corresponding national food safety standards for the directly contacting layer.
[b] For coatings used in food contact materials and articles intended for infants and young children, the results shall be converted according to the actual area-to-volume ratio during use, expressed in mg/kg, and the limit shall be ≤ 60 mg/kg.
[c] For cookware coatings, the test condition shall be “boiling for 0.5 hour, then placed at room temperature for 24 hours”; for other coatings, the test condition shall be “60°C for 2 hours.”
[d] Applicable only to coatings containing aromatic isocyanates and azo colorants that may produce aromatic primary amine substances. After the curing reaction of the coating is

completed, migration tests for aromatic primary amines shall be carried out on the finished food contact materials and articles. The migration limits of aromatic primary amines specified in this standard's Appendix A and GB 9685, and relevant announcements shall be implemented according to corresponding provisions.

4.3.2 Other physical and chemical indicators

4.3.2.1 Coatings and coating layers for food contact materials and articles shall comply with the specific migration limit (SML), specific total migration limit [SML(T)], and maximum residual quantity (QM) requirements for base materials as specified in Appendix A and relevant announcements.

4.3.2.2 Coatings and coating layers for food contact materials and articles shall comply with the SML, SML(T), and QM requirements for additives as specified in GB 9685 and relevant announcements.

5. Other Requirements

5.1 Migration test

5.1.1 Migration tests shall be conducted according to GB 31604.1 and GB 5009.156. Where special provisions are specified in this standard, such provisions shall prevail.

5.1.2 When performing the total migration test using 4% (volume fraction) acetic acid on the surface coatings of metal cans (including can bodies, lids, and pull tabs), if changes occur that do not appear under common conditions of use (e.g., coating detachment, blistering, rusting of metal), or if precipitation, turbidity, or other changes are observed in the immersion liquid, a representative sample shall be prepared by applying the same coating material to an inert substrate (such as stainless steel or glass) and re-tested for total migration. If such changes persist when using the inert substrate, or if preparation of representative samples is not feasible, 10% (volume fraction) ethanol may be used in place of 4% (volume fraction) acetic acid.

5.2 Labeling

Labeling shall comply with the provisions of GB 4806.1.

Appendix A

Permitted Basic Raw Materials and Usage Requirements for Coatings and Coating Layers for Food Contact Materials and Articles

A.1 Table A.1 specifies the list of permitted basic raw materials for coatings and coating layers for food contact materials and articles, along with their usage requirements. The basic raw materials listed in Table A.1 are identified by their CAS numbers; for those without CAS numbers, their Chinese names shall prevail.

A.2 Substances with a relative molecular mass greater than 1000 Da, formed by polymerization or other methods from the monomers, other starting materials, and base polymers listed in Table A.1, are also permitted as basic raw materials for coatings and coating layers for food contact, and shall comply with the restrictive requirements of the corresponding monomers, other starting materials, and base polymers.

A.3 The specific total migration limits [SML(T)] and SML(T) grouping numbers in GB 9685 apply to this standard.

A.4 For polymers listed in Table A.1, the sodium, potassium, and calcium salts (including acid salts and double salts) of the monomers and other starting materials used in the synthesis of the corresponding polymers may also be used in the synthesis of the corresponding polymers, and shall comply with the relevant restrictive requirements for the corresponding acid, alcohol, or phenol monomers and other starting materials; the sodium, potassium, and calcium salts (including acid salts and double salts) of the monomers and other starting materials listed in Table A.1 shall be used in accordance with the provisions of this standard.

Table A.1: Permitted Basic Raw Materials and Usage Requirements for Coatings and Coating Layers for Food Contact Materials and Articles

Serial No.	Name	CAS No.	Maximum use %	SML/QM mg/kg	SML(T) mg/kg	SML(T) group No.	Other requirements
1	Polymer of (E)-2-butenic acid with 1,3-isobenzofuran dione and tricyclodecanediol	68784-89-4	15 (based on dry weight of coating)	0.05 (Tricyclodecanoic acid: SML)			The operating temperature must not exceed 121℃.
2	(Z)-9-Octadecenoimide bis-2,1-ethylenedimethylethylene oxide	26635-93-8	Use as needed for production	ND (ethylene oxide: SML, DL = 0.01 mg/kg) or 1 (ethylene oxide: QM)			Ethylene oxide readily reacts with water-based food simulants; residue screening can be used to verify migration levels and thus compliance.
3	(Z, Z)-α-(1-oxo-9-enoctadecyl)-ω-[(1-oxo-9-enoctadecyl) oxo] polyoxyethylene	9005-07-6	Use as needed for production	ND (ethylene oxide: SML, DL = 0.01 mg/kg) or 1 (ethylene oxide: QM)			The operating temperature must not exceed 100℃; ethylene oxide readily reacts with water-based food

							simulants, and its compliance can be verified by residual amount screening and migration measurement.
4	The reaction products of (2E,4E)-2,4-hexadienoic acid with hydroquinone, epichlorohydrin, ethyl acrylate, 4, 4' - methylenebis (2,6-dimethylphenol), methyl methacrylate, polymers of methacrylic acid and acrylic acid, and dimethylaminoethanol.	—	Use as needed for production	For the relevant limits of 0.6% (hydroquinone: SML) and 4,4'-methylenebis (2,6-dimethylphenol) (TMBPF), please refer to Note 1.	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	It must not be used in the production of contact materials and products for infant and toddler foods; the operating temperature must not exceed 130℃; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by residual screening and migration testing.
5	Polymer of (3R)-3-hydroxybutyric acid and 4-hydroxybutyric acid	125495-90-1	Use as needed for production		5 (calculated as 1,4-butanediol)	30	Do not use in contact with foods containing ethanol; operating temperature must not exceed 100℃.
6	α-9-(Z)-octadecenoyl-ω-hydroxypoly (oxyethylene)	9004-98-2	2 (based on dry weight of coating)	ND (Ethylene oxide: SML, DL=0.01mg/kg) or 1 (Ethylene oxide: QM)			Ethylene oxide readily reacts with water-based food simulants; residue screening can be used to verify migration levels and thus compliance.
7	α-Acetyl-ω-acetoxy-poly (methyleneoxy)	25231-38-3	Use as needed for production		15 (calculated as formaldehyde)	15	The operating temperature must not exceed 121℃.
8	Polymers of ε-caprolactam and polyhexamethylene adipamide; Polymers of ε-caprolactam and 1,6-hexamethylene adipamide and 1,6-hexamethylene adipamide	24993-04-2	Use as needed for production	2.4 (1,6-Hexanediamine: SML)	15 (calculated as caprolactam)	4	
9	1,1-Dichloroethylene-vinyl	9011-06-7	Use as needed for	ND (1,1-			

	chloride polymer		production	dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene, QM); ND (vinyl chloride: SML, DL = 0.01 mg/kg) or 1 (vinyl chloride, QM)			
10	Polymer of 1,1-dichloroethylene and acrylonitrile	9010-76-8	Use as needed for production	ND (1,1-dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene: QM); ND (acrylonitrile: SML, DL = 0.01 mg/kg)			The operating temperature must not exceed 121℃.
11	Polymer of 1,1-dichloroethylene and methyl acrylate	25038-72-6	Use as needed for production	ND (1,1-dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene: QM)	6 (calculated as acrylic acid)	22	
12	Polymers of 1,1-dichloroethylene with methyl acrylate and acrylonitrile	24968-80-7	Use as needed for production	ND (1,1-dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene: QM); ND (acrylonitrile: SML, DL = 0.01 mg/kg)	6 (calculated as acrylic acid)	22	
13	Polymer of 1,1-dichloroethylene and methyl methacrylate	25120-29-0	Use as needed for production	ND (1,1-dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene: QM)	6 (calculated as methacrylic acid)	23	The operating temperature must not exceed 121℃.
14	Polymers of 1,1-dichloroethylene with methyl methacrylate and methacrylonitrile	32335-23-2	Use as needed for production	ND (1,1-dichloroethylene: SML, DL = 0.01 mg/kg) or 5 (1,1-dichloroethylene:	6 (calculated as methacrylic acid)	23	The operating temperature must not exceed 121℃.

				QM); ND (methacrylonitrile: SML, DL = 0.01 mg/kg)			
15	1,2-Diaminoethane	107-15-3	Use as needed for production	12 (1,2-Diaminoethane: SML)			
16	1,2-Ethylene glycol	107-21-1	Use as needed for production		30 (calculated as ethylene glycol)	2	
17	Polymer of 1,2-ethylene glycol with 2,2-dimethyl-1,3-propanediol, terephthalic acid, isophthalic acid, 1,6-adipic acid, and itaconic acid	1041633-99-1	120 (based on dry weight of coating)	0.05 (2,2-Dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	For use only in room temperature filling and long-term storage at room temperature (including hot filling and pasteurization under conditions of T ≤ 70 °C, t ≤ 2h or T ≤ 100 °C, t ≤ 15 minutes)
18	Polymers of 1,2-ethylene glycol with isophthalic acid, dimethyl terephthalate, and 1,6-adipic acid	82076-71-9	30 (based on coating formulation)		30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	Do not use in contact with foods containing ethanol; operating temperature must not exceed 121℃.
19	Polymers of 1,3,5-triazine-2,4,6-triamine and butylated methylformaldehyde; polymers of melamine and butylated methylformaldehyde	68036-97-5	Use as needed for production	2.5 (Melamine: SML)	15 (calculated as formaldehyde)	15	When used in the production of food contact materials and products specifically for infants and young children, the melamine SML is 1 mg/kg.
20	Polymers of 1,3,5-triazine-2,4,6-triamine and butylated formaldehyde; polymers of melamine and butylated formaldehyde	68002-25-5	Use as needed for production	2.5 (Melamine: SML)	15 (calculated as formaldehyde)	15	When used in the production of food contact materials and products specifically for infants and young children, the melamine SML is 1 mg/kg.
21	Polymers of 1,3,5-triazine-2,4,6-triamine and formaldehyde; Polymers of	9003-08-1		2.5 (Melamine: SML)	15 (calculated as formaldehyde)	15	When used in the production of food contact materials and products specifically for

	melamine and formaldehyde						infants and young children, the melamine SML limit is 1 mg/kg; it must not be used for microwave heating; when the food contact category includes acidic foods, the mimic used in migration testing is only 4% (volume fraction) acetic acid.
22	Polymers of 1,3,5-trioxane and 1,3-dioxepane	25214-85-1	Use as needed for production	5 (1,3,5-trioxane: SML);0.05(1,3-dioxepane: SML)	15 (calculated as formaldehyde); 5 (calculated as 1,4-butanediol)	15; 30	The operating temperature must not exceed 121℃.
23	Polymers of 1,3,5-trioxane and 1,3-dioxane	24969-26-4	Use as needed for production	5 (1,3,5-trioxocyclohexane: SML); 5(1,3-dioxocyclopentane: SML); ND [1,4-bis (2,3-epoxypropoxy) butane: SML, DL = 0.01 mg/kg] or 1 [1,4-bis (2,3-epoxypropoxy) butane, based on epoxy groups: QM]	15 (calculated as formaldehyde)	15	The operating temperature must not exceed 121℃; if it contains 1,4-bis (2,3-epoxypropoxy) butane, its mass fraction must not exceed 2%; if it does not contain it, there is no limit. 1,4-bis (2,3-epoxypropoxy) butane readily reacts with water-based food simulants; compliance can be verified by residual screening and migration testing.
24	Polymers of 1,3,5-trioxane and ethylene oxide	24969-25-3	Use as needed for production	5 (1,3,5-Trioxane: SML); ND (Ethylene oxide: SML, DL=0.01mg/kg) or 1 (Ethylene oxide: QM)	15 (calculated as formaldehyde)	15	The operating temperature must not exceed 121℃; ethylene oxide readily reacts with water-based food simulants, and its compliance can be verified by residual amount screening and migration testing.
25	1,3-Butadiene	106-99-0	Use as needed for	ND (1,3-Butadiene:			

			production	SML, DL = 0.01 mg/kg)			
26	Homopolymers of 1,3-butadiene oligomer	68441-52-1	Use as needed for production	ND (1,3-Butadiene: SML, DL = 0.01mg/kg)			
27	1,3-Dihydro-1,3-dioxo-5-isobenzofuran carboxylic acid; trimellitic anhydride	552-30-7	Use as needed for production		5 (calculated as trimellitic acid)	21	
28	Polymers of 1,3-dihydro-1,3-dioxo-5-isobenzofuran carboxylic acid and 1,2-ethylene glycol; polymers of trimellitic anhydride and 1,2-ethylene glycol	43011-20-7	5 (based on dry weight of coating)		30 (calculated as ethylene glycol); 5 (calculated as trimellitic acid)	2; 21	The operating temperature must not exceed 121℃.
29	Polymer of 1,4-butanediamine and 1,6-adipic acid	50327-22-5; 50327-77-0	Use as needed for production				
30	1,4-Butanediol	110-63-4	Use as needed for production	0.6 (Tetrahydrofuran: SML)	5 (calculated as 1,4-butanediol, SML)	30	
31	Polymer of 1,4-butanediol dimethyl acrylate with hydroxyethyl methacrylate, ethyl acrylate, acrylic acid, and styrene	—	92 (based on coating formulation)	0.05 (1,4-Butanediol dimethacrylate: SML); 0.6 (Tetrahydrofuran: SML)	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	It must not be used in the production of food contact materials and products specifically for infants and young children.
32	Polymers of 1,4-butanediol with 1,2-ethylene glycol, 1,2-propanediol, trimethylolpropane, dimethyl terephthalate, isophthalic acid, and sebacic acid	—	30 (based on coating formulation)	6 (trimethylolpropane: SML); 0.6 (tetrahydrofuran: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	2; 27; 28; 30	It must not be used in the production of food contact materials and products specifically for infants and young children.
33	Polymer of 1,4-butanediol with	—	30 (based on dry	0.05 (2,2-Dimethyl-1,3-	5 (calculated as	27; 30	The operating temperature

	2,2-dimethyl-1,3-propanediol, 1,4-cyclohexanediol and isophthalic acid		weight of coating)	propanediol: SML); 5 (1,4-Cyclohexanoic acid: SML); 0.6 (Tetrahydrofuran: SML)	isophthalic acid); 5 (calculated as 1,4-butanediol)		must not exceed 130℃.
34	Polymer of 1,4-di (hydroxymethyl) cyclohexane with 2-methyl-1,3-propanediol, 4,8-tricyclo [5.2.1.02,7] decanediol, terephthalic acid, isophthalic acid, maleic acid, and 5-isocyanate-1-(isocyanate-methyl)-1, 3, 3-trimethylcyclohexane	—	30 (based on coating formulation)	6 [1,4-Di (hydroxymethyl) cyclohexane: SML]; 5 (2-methyl-1,3-propanediol: SML); 0.05 (4,8-tricyclo [5.2.1.$0^{2,7}$] decanediol: SML); 1 (as isocyanate: QM)	30 (calculated as maleic acid); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	3; 27; 28	It must not be used in the production of food contact materials and products specifically for infants and young children.
35	Polymer of 1,4-di (hydroxymethyl) cyclohexane with 1,2-ethylene glycol, 2,2-dimethyl-1,3-propanediol, isophthalic acid, dimethyl terephthalate, and trimellitic anhydride	74239-60-4	30 (based on coating formulation)	6 [1,4-Di (hydroxymethyl) cyclohexane: SML]; 5 (2,2-Dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as trimellitic acid); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 21; 27; 28	The operating temperature must not exceed 130℃; it must not be used in the production of food contact materials and products specifically for infants and young children.
36	Polymer of 1,4-dichlorobenzene and sodium sulfide	26125-40-6; 25212-74-2	Use as needed for production	12 (1,4-Dichlorobenzene: SML)			The operating temperature must not exceed 121℃.
37	A copolymer of 1,4-cyclohexanediol with 3-hydroxymethylpropane, 2,2-dimethyl-1,3-propanediol, 1,6-adipic acid, isophthalic acid, and maleic anhydride	—	65 (based on dry weight of coating)	6 (3-hydroxymethylpropane: SML); 0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as maleic acid: SML); 5 (calculated as isophthalic acid)	3; 27	Do not use in contact with foods containing ethanol; operating temperature must not exceed 121℃.
38	1,6-Diisocyanate hexane; Hexamethylene diisocyanate	822-06-0	Use as needed for production	1 (calculated as isocyanate: QM)	ND (calculated as isocyanate: DL = 0.01 mg/kg)	17	Coating thickness must not exceed 12μm.
39	Polymer of 1,6-hexanediamine	26098-55-5	Use as needed for	2.4 (1,6-Hexanediamine:			

	and 1,12-dodecanoic acid		production	SML)			
40	Polymer of 1,6-hexanediamine with 1,6-hexanoic acid, ε-caprolactam and bis (4-aminocyclohexyl) methane	25053-13-8	Use as needed for production	2.4 (1,6-hexanediamine: SML); 0.05 [bis (4-aminocyclohexyl) methane: SML]	15 (calculated as caprolactam)	4	
41	Polymer of 1,6-hexanediamine with 1,6-adipic acid and terephthalic acid	25776-72-1	Use as needed for production	2.4 (1,6-Hexanediamine: SML)	7.5 (calculated as terephthalic acid)	28	
42	Polymers of 1,6-hexanediamine and terephthalic acid (1:1) and polymers of ε-caprolactam (or its sodium salt)	51025-80-0	Use as needed for production	2.4 (1,6-Hexanediamine: SML)	15 (calculated as caprolactam); 7.5 (calculated as terephthalic acid)	4; 28	
43	Polymers of 1,6-hexanediamine and sebacic acid; polyhexanediamine sebacic acid	9008-66-6; 9011-52-3; 6422-99-7	Use as needed for production	2.4 (1,6-Hexanediamine: SML)			
44	Polymers of 1,6-hexanediamine with isophthalic acid and terephthalic acid	25750-23-6	Use as needed for production	2.4 (1,6-Hexanediamine: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	
45	1,6-Adipic acid	124-04-9	Use as needed for production				
46	Polymer of 1,6-adipic acid with (E)-2-butenic acid and 4, 8-tricyclic [5.2.1.$0^{2,7}$] decanedimethyl alcohol	58891-19-3	18 (based on dry weight of coating)	0.05 (4, 8-tricyclo [5.2.1.$0^{2,7}$] decane dimethyl alcohol: SML)			The operating temperature must not exceed 121℃; it must not be used in the production of food contact materials and products specifically for infants and young children.
47	Polymers of 1,6-adipic acid with 1,4-butanediol, hexamethylene diisocyanate, 1,6-hexanediol, and 2,2-	29891-05-2	Use as needed for production	1 (Hexamethylene diisocyanate, calculated as isocyanate: QM); 0.05 (1,6-hexanediol:	ND (calculated as isocyanate: DL = 0.01 mg/kg); 5 (calculated as 1,4-	17; 30	The operating temperature must not exceed 200℃; hexamethylene diisocyanate readily reacts with water-based

	dimethyl-1,3-propanediol			SML); 0.05 (2,2-dimethyl-1,3-propanediol: SML); 0.6 (tetrahydrofuran: SML)	butanediol)		food simulants, and its compliance can be verified by residual screening migration; if it contains 2,2-dimethyl-1,3-propanediol, its mass fraction must not exceed 2%; if it does not contain it, there is no need to limit its content.
48	Polymer of 1,6-adipic acid with 1,4-butanediol and hexamethylene diisocyanate	28476-49-5	Use as needed for production	1 (Hexamethylene diisocyanate, calculated as isocyanate: QM)	ND (calculated as isocyanate: DL = 0.01 mg/kg); 5 (calculated as 1,4-butanediol)	17; 30	The operating temperature must not exceed 200°C; hexamethylene diisocyanate readily reacts with water-based food simulants, and its compliance can be verified by residue screening and migration testing.
49	Polymer of 1,6-adipic acid with 1,6-hexanediol and 2,2-dimethyl-1,3-propanediol	25214-14-6	Use as needed for production	0.05 (2,2-dimethyl-1,3-propanediol: SML); 0.05 (1,6-hexanediol: SML)			Not for use in contact with foods containing ethanol.
50	Polymers of 1,6-adipic acid with terephthalic acid, 1,2,4-triphenyltriatic anhydride, 1,2-ethylene glycol, and 2,2-dimethyl-1,3-propanediol	114267-10-6	70 (based on dry weight of coating)	0.05 (2,2-Dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as trimellitic acid); 7.5 (calculated as terephthalic acid)	2; 21; 28	
51	Polymer of 1,6-adipic acid with isophthalic acid, maleic anhydride, 2-methyl-1,3-propanediol, trimethylolpropane, and dimethyl 2,6-naphthalenedicarboxylate	—	75 (based on dry weight of coating)	5 (2-Methyl-1,3-propanediol: SML); 6 (Trimethylolpropane: SML); 0.05(Dimethyl 2,6-naphthalenedicarboxylate: SML)	30 (calculated as maleic acid); 5 (calculated as isophthalic acid: SML)	3; 27	

52	1-Butene homopolymer; Poly 1-butene	9003-28-5	Use as needed for production				
53	1-Methylstyrene and styrene polymer	9011-11-4	Use as needed for production				
54	2-(Dimethylamino) ethanol	108-01-0	2 (based on dry weight of coating)	18 [2-(Dimethylamino) ethanol: SML]			
55	2,2'- [(1-methylethylene) bis (4,1- phenoxymethylene)] bis (ethylene oxide); Bisphenol A diglycidyl ether	1675-54-3	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (ethylene oxide: SML, DL=0.01mg/kg) or 1 (ethylene oxide: QM); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.			Ethylene oxide readily reacts with water-based food simulants; residue screening can be used to verify migration levels and thus compliance.
56	2,2-Dimethyl-1,3-propanediol	126-30-7	Use as needed for production	0.05 (2,2-Dimethyl-1,3-propanediol: SML)			
57	2,6-Dimethylphenol	576-26-1	Use as needed for production	0.05 (2,6-Dimethylphenol: SML)			
58	Polymers of 2,6-dimethylphenol and 2,3,6-trimethylphenol	58295-79-7	Use as needed for production	0.05 (2,6-dimethylphenol: SML); 0.05 (2,3,6-trimethylphenol: SML)			
59	2-Phenylacetylene	98-83-9	Use as needed for production	0.05 (2-Phenylacetylene: SML)			
60	Polymer of 2-methyl-1,3-propanediol with terephthalic acid, 1,4-cyclohexanediol, isophthalic acid, 1,2-ethylene glycol, trimethylolpropane, and sebacic acid	—	Use as needed for production	6 (Trimethylolpropane: SML); 5 (2-Methyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	

61	2-Methyl-1,3-butadiene	78-79-5	Use as needed for production	ND (2-methyl-1,3-butadiene: SML, DL = 0.01 mg/kg) or 1 (2-methyl-1,3-butadiene: QM)			
62	2-Methylenesuccinic acid	97-65-4	Use as needed for production				
63	Polymers of 3-(4-hydroxy-3-methoxyphenyl) propyl-terminated polydimethylsiloxanes and silicone resins with 4,4'-dihydroxydiphenylpropane, carbamate dichlorophenoxide, and 4-(1-methyl-1-phenylethyl) phenol; polymers of 3-(4-hydroxy-3-methoxyphenyl) propyl-terminated polydimethylsiloxanes and silicone resins with bisphenol A, carbamate dichlorophenoxide, and 4-(1-methyl-1-ethyl) phenol.	202483-49-6	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (carbonyl dichloro: SML, DL=0.01mg/kg) or 1 (carbonyl dichloro: QM); 0.05 [4-(1-methyl-1-phenylethyl) phenol: SML]	ND [calculated as 3-(4-hydroxy-3-methoxy phenyl) propyl]	33	Not permitted for use in the production of food contact materials and products specifically for infants and young children; not permitted for use in contact with foods containing more than 50% (volume fraction) of ethanol.
64	Polymers of 4,4'-(1-methylethylidene)-bisphenol and epichlorohydrin benzoate; Polymers of bisphenol A and epichlorohydrin benzoate	52907-82-1	19.7 (based on coating formulation)	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (epicochloropropane: SML, DL=0.01 mg/kg) or 1 (epicochloropropane: QM); Bisphenol A diglycidyl ether			It is prohibited from being used in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and residue screening can be used to verify its compliance by assessing

				(BADGE) and other related limits are shown in Note 2.			migration levels.
65	Polymers of 4,4'-(1-methylethylidene) bisphenol and epichlorohydrin with methacrylic acid, maleic anhydride and toluene diisocyanate; polymers of bisphenol A and epichlorohydrin with methacrylic acid, maleic anhydride, and toluene diisocyanate.	—	Use as needed for production	1 [Polymer of 4,4'-(1-methylethylidene) bisphenol/bisphenol A and epichlorohydrin: QM] or ND [Polymer of 4,4'-(1-methylethylidene) bisphenol/bisphenol A and epichlorohydrin: SML]; 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 1 [Toluene diisocyanate (mixture of 2,4- and 2,6-positions): QM]; for relevant limits on bisphenol A diglycidyl ether (BADGE), see Note 2.	30 (calculated as maleic acid); 6 (calculated as methacrylic acid)	3; 23	It is prohibited from being used in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and residue screening can be used to verify its compliance by assessing migration levels.
66	Polymer of 4,4'-(4,4'-isopropylidene diphenoxy) bis (phthalic anhydride) and 1,3-phenylenediamine	61128-46-9	Use as needed for production	0.05 [4,4'-(4,4'-isopropylidene diphenoxy) bis (phthalic anhydride): SML]; 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (1,3-phenylenediamine: SML, DL =0.002mg/kg)			It must not be used in the production of food contact materials and products specifically for infants and young children.
67	Polymers of 4,4'-(4,4'-	77699-82-2	Use as needed for	0.05 [4,4'-(4,4'-			It must not be used in the

	isopropylidene diphenoxy) bis (phthalic anhydride) and 4,4'-sulfonyl diphenylamine		production	isopropylidene diphenoxy) bis (phthalic anhydride): SML]; 0.05(4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 5(4,4'-sulfonylbisphenylamine: SML)			production of food contact materials and products specifically for infants and young children.
68	4,4'-Difluorobenzophenone and hydroquinone polymer	29658-26-2	Use as needed for production	0.05 (4,4'-Difluorobenzophenone: SML); 0.6 (hydroquinone: SML); 0.2 (fluorine: SML)			
69	4,4'-Dihydroxydiphenylpropane; Bisphenol A	80-05-7	Use as needed for production	0.05 (4,4'-Dihydroxydiphenylpropane/Bisphenol A: SML)			It must not be used in the production of food contact materials and products specifically for infants and young children.
70	Polymers of 4,4'-dihydroxydiphenylpropane and epichlorohydrin with methacrylic acid, maleic anhydride and toluene diisocyanate; polymers of bisphenol A and epichlorohydrin with methacrylic acid, maleic anhydride and toluene diisocyanate	—	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (epicochloropropane: SML, DL = 0.01 mg/kg) or 1 (epicochloropropane: QM); 1 (polymer of bisphenol A and epichloropropane: QM) or ND (polymer of bisphenol A and	30 (calculated as maleic acid); ND (calculated as isocyanate, DL = 0.01 mg/kg); 6 (calculated as methacrylic acid)	3; 17; 23	It is prohibited from being used in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and residue screening can be used to verify its compliance by assessing migration levels.

				epichloropropane: SML); 1 [toluene diisocyanate (mixture of 2,4- and 2,6-positions): QM]; For relevant limits on bisphenol A diglycidyl ether (BADGE), see Note 2.			
71	Polymers of 4,4'-dihydroxydiphenylpropane and 1,1'-sulfonyl-bis (4-chlorobenzene); polymers of bisphenol A and 1,1'-sulfonyl-bis (4-chlorobenzene)	25154-01-2	Use as needed for production	0.05 (4,4'-dihydroxy-diphenylpropane/bisphenol A: SML); 0.05 (1,1'-sulfonyl-bis (4-chlorobenzene): SML)			The operating temperature must not exceed 121℃; it must not be used in the production of food contact materials and products specifically for infants and young children.
72	Polymers of 4,4'-dihydroxydiphenylpropane with 3-chlorophthalic anhydride, 4-chlorophthalic anhydride, phthalic anhydride and 1,3-phenylenediamine	536741-00-1	Use as needed for production	0.05 (4,4'-Dihydroxydiphenylpropane/Bisphenol A: SML); 0.05 (3-Chlorophthalic anhydride, calculated as 3-chlorophthalic acid: SML); 0.05 (4-Chlorophthalic anhydride, calculated as 4-chlorophthalic acid: SML); ND (1,3-Phenylenediamine: SML, DL = 0.002 mg/kg)			It must not be used in the production of food contact materials and products specially for infants and young children.
73	Polymers of 4,4'-dihydroxydiphenylpropane with 3-chlorophthalic anhydride, 4-chlorophthalic anhydride, and 1,3-phenylenediamine, using 4-	911701-92-3	Use as needed for production	0.05 (4,4'-Dihydroxydiphenylpropane/Bisphenol A: SML); ND (1,3-phenylenediamine:			It must not be used in the production of food contact materials and products specifically for infants and young children.

	(1-methyl-1-phenylethyl) phenol as the end-capping agent; polymers of bisphenol A with 3-chlorophthalic anhydride, 4-chlorophthalic anhydride, and 1,3-phenylenediamine, using 4-(1-methyl-1-phenylethyl) phenol as the end-capping agent			SML, DL = 0.002 mg/kg); 0.05 (3-chlorophthalic anhydride, calculated as 3-chlorophthalic acid: SML); 0.05 (4-chlorophthalic anhydride, calculated as 4-chlorophthalic acid: SML); 0.05 [4-(1-methyl-1-phenylethyl) phenol: SML]			
74	Polymers of 4,4'-dihydroxydiphenylpropane and epichlorohydrin; polymers of bisphenol A and epichlorohydrin	25068-38-6	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (epimylochloropropane: SML, DL=0.01 mg/kg: SML) or 1 (epimylochloropropane: QM); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.			It is prohibited from being used in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and residue screening can be used to verify its compliance by assessing migration levels.
75	Polymers of 4,4'-sulfonyl diphenol and 4,4'-dichlorodiphenyl sulfone; polymers of 4,4'-sulfonyl diphenol and 1,1'-sulfonyl di (4-chlorobenzene); polymers of bisphenol S and 1,1'-sulfonyl di (4-chlorobenzene)	25667-42-9; 25608-63-3	Use as needed for production	0.05 (4,4'-sulfonyl diphenylphenol/bisphenol S: SML); 0.05(4,4'-dichlorodiphenyl sulfone: SML)			

76	Polymers of 4,4’-biphenyl and 1,1’-sulfonyl di (4-chlorobenzene)	25608-64-4; 25839-81-0	Use as needed for production	6 (4,4’-Bisphenol: SML);0.05 [1,1'-Sulfodi (4-chlorobenzene): SML]			
77	Polymers of 4,4’-isopropylphenol and formaldehyde	25085-75-0	10 (based on dry weight of coating)	0.6 (4,4’-isopropylphenol: SML)	15 (calculated as formaldehyde)	15	Not permitted for use in the production of food contact materials and products for infants and young children.
78	Polymers of 4,8-tricyclic [5.2.1.$0^{2,7}$] decanediethanol with terephthalic acid and 1,6-hexanediol	—	60 (based on coating formulation)	0.05 (4,8-tricyclo [5.2.1.$0^{2,7}$] decane-diethanol: SML); 0.05 (1,6-hexanediol: SML)	7.5 (calculated as terephthalic acid)	28	It must not be used in the production of food contact materials and products for infants and young children.
79	Polymers of 4-ethylphenol with m-cresol, p-cresol, p-tert-butylphenol and formaldehyde	68957-28-8	62 (based on coating formulation)	3 (Free phenol, calculated as phenol: SML); 0.05 (p-tert-butylphenol: SML)	15 (calculated as formaldehyde)	15	The operating temperature must not exceed 130℃; it must not be used in the production of food contact materials and products specifically for infants and young children.
80	The homopolymer of 5-isocyanate-1-(isocyanate-methyl)-1,3,3-trimethylcyclohexane reacts with 2,2-dimethyl-1,3-propanediol, diethylene glycol, 1,4-di (hydroxymethyl) cyclohexane, isophthalic acid, hydrogenated dimerized C18 unsaturated fatty acids, and ε-caprolactam	—	70 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML); 1 (based on isocyanate: QM)	30 (calculated as ethylene glycol); 15 (calculated as caprolactam); ND (calculated as isocyanate, DL = 0.01 mg/kg); 5 (calculated as isophthalic acid)	2; 4; 17; 27	It must not be used in contact with foods containing ethanol; it must not be used in the production of food contact materials and products specially for infants and young children; the operating temperature must not exceed 121℃.
81	Polymers of 6-hydroxy-2-naphtholic acid with 4-hydroxybenzoic acid, terephthalic acid, 4,4’-	147310-94-9	Use as needed for production	0.05 (6-hydroxy-2-naphthoic acid: SML); 6 (4,4’-dihydroxybiphenyl:	7.5 (calculated as terephthalic acid)	28	It must not be used in contact with foods containing ethanol or fat/oil.

	dihydroxybiphenyl, and N-(4-hydroxyphenyl) acetamide			SML); 0.05 [N-(4-hydroxyphenyl) acetamide: SML]			
82	Polymer of 6-hydroxy-2-naphthoic acid and N-(4-hydroxyphenyl) acetamide	70679-92-4	Use as needed for production	0.05 (6-hydroxy-2-naphthoic acid: SML); 6 (4,4'-dihydroxybiphenyl: SML); 0.05 [N-(4-hydroxyphenyl) acetamide: SML]			It must not be used in foods that come into contact with ethanol or oil/fat; if it contains 4,4'-dihydroxybiphenyl, its mass fraction must not exceed 2%; if it does not contain it, there is no limit.
83	$C_{10\sim16}$-Alcohol	67762-41-8	Use as needed for production				
84	$C_{16\sim18}$-Alcohol	67762-27-0	Use as needed for production				
85	N, N', N''-[(2,4,6-trioxo-1,3,5-triazine-1,3,5-[2H,4H,6H)-triyl] tri[methylene(3,5,5-trimethyl-3,1-cyclohexanediyl)]-tri [hexahydro-2-oxo-1H-azapyrrolidone-1-formamide; caprolactam-terminated isophorone diisocyanate trimer]	68975-83-7	Use as needed for production	1 (QM, calculated as isocyanate)	15 (calculated as caprolactam); ND (calculated as isocyanate, DL = 0.01 mg/kg)	4; 17	
86	Brazilian carnauba wax	8015-86-9	Use as needed for production				
87	Phenol	108-95-2	Use as needed for production	3 (phenol: SML)			
88	Butyl ether of phenol and formaldehyde polymers	129870-78-6	Use as needed for production	3 (phenol: SML)	15 (calculated as formaldehyde)	15	
89	Styrene	100-42-5	Use as needed for production				
90	Styrene-modified epoxy resin	—	Use as needed for	ND			It must not be used in contact

			production	(epicochloropropane: SML, DL = 0.01 mg/kg) or 1 (epicochloropropane: QM); 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 3.0 (free phenol, calculated as phenol: SML); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.			with ethanol-containing foods or oil/fat-containing foods; it must not be used in the production of food contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by residual screening migration; the limits for bisphenol A and BADGE only apply to bisphenol A type epoxy resins.
91	Styrene homopolymer; Polystyrene	9003-53-6	Use as needed for production				
92	Polymer of styrene and 1,3-butadiene	9003-55-8	Use as needed for production	ND (1,3-butadiene: SML, DL = 0.01 mg/kg) or 1 (1,3-butadiene: QM)			
93	Polymers of styrene and 2-methyl-1,3-butadiene	25038-32-8	Use as needed for production	ND (2-methyl-1,3-butadiene: SML, DL = 0.01 mg/kg) or 1 (2-methyl-1,3-butadiene: QM)			
94	Polymers of styrene with ethyl acrylate, methacrylic acid, and glycidyl methacrylate	56990-26-2	82.1 (based on dry weight of coating)	0.02 (based on glycidyl methacrylate: SML)	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22;23	The operating temperature must not exceed 130℃; it must not be used in the production of food contact materials and products specifically for infants and young children; when glycidyl methacrylate reacts with the food or food

							simulant it comes into contact with, the limit value is 0.02 mg/6 dm² (QM).
95	Polymer of styrene and methacrylic acid	9010-92-8	Use as needed for production		6 (calculated as methacrylic acid)	23	The operating temperature shall not exceed 121°C.
96	Ricinoleic acid	141-22-0	Use as needed for production	42 (Ricinoleic acid: SML)			
97	Propylene glycol; 1,2-Propylene glycol	57-55-6	Use as needed for production				
98	Glycerol; Glycerin	56-81-5	Use as needed for production				
99	Acrylonitrile	107-13-1	Use as needed for production	ND (Acrylonitrile: SML, DL=0.01 mg/kg)			
100	The polymer of acrylonitrile and 1,3-butadiene	9003-18-3	Use as needed for production	ND (1,3-butadiene: SML, DL = 0.01 mg/kg); ND (acrylonitrile: SML, DL = 0.01 mg/kg)			It must not be used in the production of beverage containers.
101	Acrylic acid	79-10-7	Use as needed for production		6 (calculated as acrylic acid)	22	
102	2-Hydroxyethyl Acrylate	818-61-1	Use as needed for production		6 (calculated as acrylic acid)	22	
103	Butyl acrylate	141-32-2	Use as needed for production		6 (calculated as acrylic acid)	22	
104	Copolymer of butyl acrylate and styrene	25767-47-9	20 (based on dry weight of coating)		6 (calculated as acrylic acid)	22	
105	Polymer of butyl acrylate, methyl methacrylate, and styrene	27136-15-8	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
106	Acrylic-modified epoxy resin	—	Use as needed for	ND	6 (calculated as	22	It must not be used in contact

			production	(epimylochloropropane: SML, DL = 0.01 mg/kg) or 1 (epimylochloropropane: QM); 3.0 (free phenol, calculated as phenol: SML); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.	acrylic acid)		with ethanol-containing foods or oil/fat-containing foods; it must not be used in the production of food contact materials and products for infants and young children; epichlorohydrin readily reacts with water-based food simulants; its compliance can be verified by residual screening and migration measurement. The limits for bisphenol A and related BADGE parameters only apply to bisphenol A type epoxy resins.
107	Methyl acrylate	96-33-3	Use as needed for production		6 (calculated as acrylic acid)	22	
108	Polymer of methyl acrylate with 1,3-butadiene and acrylonitrile	27012-62-0	Use as needed for production	ND (1,3-butadiene: SML, DL = 0.01 mg/kg); ND (acrylonitrile: SML, DL = 0.01 mg/kg)	6 (calculated as acrylic acid)	22	For use only in contact with water-based foods, oil/fat-containing foods, and dry foods; the temperature of use should not exceed 66℃.
109	Ethyl acrylate	140-88-5	Use as needed for production		6 (calculated as acrylic acid)	22	
110	Polymers of ethyl acrylate and 2-ethylhexyl acrylic acid	26376-86-3	Use as needed for production	0.05 (2-ethylhexyl acrylate: SML)	6 (calculated as acrylic acid)	22	
111	Polymers of ethyl acrylate, acrylic acid, and styrene	—	2 (based on coating formulation)		6 (calculated as acrylic acid)	22	Not permitted for use in the production of food contact materials and products specifically for infants and young children.

112	Isobutyl acrylate	106-63-8	20 (based on dry weight of coating)		6 (calculated as acrylic acid)	22	
113	Acrylic acid with styrene and 1-methylstyrene polymer ammonium salt	89678-90-0	Use as needed in production	0.05 (1-methylstyrene: SML)	6 (calculated as acrylic acid)	22	
114	Polymers of acrylic acid with butyl acrylate, styrene, and acrylonitrile	25586-25-8	Use as needed for production	ND (Acrylonitrile: SML, DL = 0.01mg/kg)	6 (calculated as acrylic acid)	22	
115	Polymers of propylene and 1-butene	29160-13-2	Use as needed for production				
116	Graft polymers of propylene and maleic anhydride	25722-45-6; 107001-49-0	Use as needed for production		30 (calculated as maleic anhydride)	3	
117	Polymers of propylene and ethylene; polymers of ethylene and propylene	9010-79-1	Use as needed for production				
118	Polymers of propylene with ethylene and 1-butene	25895-47-0	Use as needed for production				
119	Polymers of propylene with ethylene and 5-ethylidene-2-norbornene	25038-36-2	Use as needed in production	0.05 (5-ethylidene-2-norbornene: SML)			The surface area in contact with food should not exceed 2 dm^2/kg as a percentage of food mass.
120	Cellulose acetate propionate	9004-39-1	Use as needed for production				
121	Cellulose acetate butyrate	9004-36-8	Use as needed for production				
122	Cellulose acetate	9004-35-7	Use as needed for production				
123	Starch	9005-25-8	Use as needed for production				
124	Butanol	71-36-3; 78-83-1;	Use as needed for production				

		78-92-2; 75-65-0					
125	Polymers of 1,4-dimethyl terephthalate with sebacic acid, 2,2-dimethyl-1,3-propanediol, and 1,2-ethylene glycol	51382-28-6	40 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 7.5 (calculated as terephthalic acid)	2; 28	Operating temperature must not exceed 130℃; must not be used in contact with food containing more than 20% (volume fraction) of ethanol; must not be used in the production of food contact materials and products specifically for infants and young children.
126	Polymers of terephthalic acid (or its dimethyl ester) with 1,4-butanediol, sebacic acid and hexamethylene diisocyanate	—	Use as needed for production	1 (hexamethylene diisocyanate, as isocyanate: QM); 0.6 (tetrahydrofuran: SML)	ND (calculated as isocyanate, DL = 0.01 mg/kg); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	17; 28; 30	Operating temperature must not exceed 100°C.
127	Polymers of terephthalic acid (or its dimethyl ester) with 1,4-butanediol, 1,6-adipic acid and hexamethylene diisocyanate	—	Use as needed for production	1 (hexamethylene diisocyanate, as isocyanate: QM); 0.6 (tetrahydrofuran: SML)	ND (calculated as isocyanate, DL = 0.01 mg/kg); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	17; 28; 30	The operating temperature shall not exceed 100℃.
128	Polymers of terephthalic acid (or its dimethyl ester) with 1,4-butanediol and 1,6-adipic acid	55231-08-8	Use as needed for production	0.6 (tetrahydrofuran: SML)	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	28; 30	Operating temperature shall not exceed 100℃.
129	Polymers of terephthalic acid (or its dimethyl ester) with isophthalic acid (or its dimethyl	27027-87-8	Use as needed for production	0.05 (dimethyl isophthalate: SML)	30 (calculated as ethylene glycol); 5 (calculated as	2; 27; 28	If dimethyl isophthalate is not used, there is no need to limit its amount.

	ester), 1,2-ethylene glycol and 2,2'-oxodiethanol				isophthalic acid); 7.5 (calculated as terephthalic acid)		
130	Polymers of terephthalic acid (or its dimethyl ester) with isophthalic acid (or its dimethyl ester) and 1,2-ethylene glycol	24938-04-3	Use as needed for production	0.05 (dimethyl isophthalate: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	Not to be used in the production of food contact materials and products specifically for infants and young children; the temperature shall not exceed 130 ℃; if dimethyl isophthalate is not used, there is no need to limit its amount.
131	A copolyester of terephthalic acid with 1,4-butanediol, fumaric acid, 1,2-ethylene glycol, and 1,6-hexanediol, grafted with styrene-maleic anhydride polymer	—	Use as needed for production	0.6 (tetrahydrofuran: SML)	30 (calculated as ethylene glycol); 30 (calculated as maleic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	2; 3; 28; 30	The coating thickness should be less than 0.12 μm and separated from food by a polypropylene layer at least 100 μm thick; for contact with oil/fat-containing foods only.
132	Polymers of terephthalic acid, dimethyl isophthalate, 1,4-butanediol, and poly(1,4-butanediol)	9086-55-9	Use as needed for production	0.05 (dimethyl isophthalate: SML); 0.6 (tetrahydrofuran: SML);	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol);	28; 30	Operating temperature shall not exceed 121℃.
133	Polymers of dimethyl terephthalate and 1,3-propanediol:	36619-23-5	Use as needed for production	0.05 (1,3-propanediol: SML)	7.5 (calculated as terephthalic acid)	28	Operating temperature must not exceed 100℃.
134	Polymers of dimethyl terephthalate and 1,4-butanediol	30965-26-5	Use as needed for production	0.6 (tetrahydrofuran: SML)	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	28; 30	Operating temperature shall not exceed 121℃.
135	Polymers of dimethyl terephthalate with 1,4-butanediol and 4,8-tricyclo	490017-22-6	59 (based on coating formulation)	0.05 (4,8-tricyclo [5.2.1.$0^{2,7}$] decanediol: SML); 0.6	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-	28; 30	The operating temperature shall not exceed 121℃; it shall not be used in the production

	[5.2.1.$0^{2,7}$] decanediol			(tetrahydrofuran: SML)	butanediol)		of food contact materials and products specifically for infants and young children.
136	Polymers of dimethyl terephthalate with 1,4-cyclohexanediol and 2,2,4,4-tetramethyl-1,3-cyclobutanediol	261716-94-3	Use as needed for production	5 (2, 2, 4, 4-tetramethyl-1,3-cyclobutanediol: SML)	5 (calculated as trimellitic acid); 7.5 (calculated as terephthalic acid)	21; 28	The operating temperature shall not exceed 100℃; if it contains the grafting agent trimellitic acid or trimellitic anhydride, its mass fraction shall not exceed 2%; if it does not contain these, there is no limit.
137	Polymers of dimethyl terephthalate with a mixture of 2,2,4-trimethyl-1,6-hexanediamine and 2,4,4-trimethyl-1,6-hexanediamine (equimolar ratio)	9069-93-6; 26246-77-5	Use as needed for production	0.05 [mixture of 2,2,4-trimethyl-1,6-hexanediamine and 2,4,4-trimethyl-1,6-hexanediamine: SML]	7.5 (calculated as terephthalic acid)	28	
138	Polymers of dimethyl terephthalate with sebacic acid, 2,2-dimethyl-1,3-propanediol and 1,2-ethylene glycol	51382-28-6	9 (based on coating formulation)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 7.5 (calculated as terephthalic acid)	2; 28	The operating temperature shall not exceed 130℃; it shall not be used in contact with food containing more than 20% (volume fraction) of ethanol; it shall not be used in the production of food contact materials and products specifically for infants and young children.
139	Polymers of terephthalic acid and 1,4-butanediol	24968-12-5	Use as needed for production	0.6 (tetrahydrofuran: SML)	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	28; 30	
140	Polymers of terephthalic acid	26062-94-2	Use as needed in	0.6 (tetrahydrofuran:	7.5 (calculated as	28; 30	Operating temperature must

	and 1,4-butanediol		production	SML)	terephthalic acid); 5 (calculated as 1,4-butanediol)		not exceed 121℃.
141	Polymers of terephthalic acid and 1,3-propanediol	26590-75-0	Use as needed for production	0.05 (1,3-propanediol: SML)	7.5 (calculated as terephthalic acid)	28	
142	Polymers of terephthalic acid with 1,2-ethylene glycol and 2,2'-oxodiaethanol	25052-77-1	Use as needed for production		30 (calculated as ethylene glycol); 7.5 (calculated as terephthalic acid)	2; 28	
143	Polymers of terephthalic acid with 1,4-butanediol and 1,12-dodecanoic acid	61778-68-5	Use as needed in production	0.6 (tetrahydrofuran: SML)	7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	28; 30	
144	Polymers of terephthalic acid with 1,6-hexanediol, 1,4-butanediol and trimellitic anhydride	—	30 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	5 (calculated as trimellitic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	21; 28; 30	Not for use in contact with ethanol-containing foods; operating temperature not exceeding 121℃.
145	Polymers of terephthalic acid with 2-methyl-1,3-propanediol, sebacic acid, isophthalic acid, and 1,2-ethylene glycol	—	Use as needed for production	5 (2-methyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
146	Polymers of terephthalic acid with isophthalic acid, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,4-	—	80 (based on dry weight of coating)	5 (2,2,4,4-tetramethyl-1,3-cyclobutanediol: SML); 5 (2-methyl-1,3-propanediol: SML); 6	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	Not permitted for use in the production of food contact materials and products specially for infants and young

	cyclohexanediol, 2-methyl-1,3-propanediol, and 1,6-adipic acid			(trimethylolpropane: SML)			children; if containing trimethylolpropane, its mass fraction shall not exceed 2%, if not containing it, there is no limit.
147	Polymers of terephthalic acid with isophthalic acid, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,4-cyclohexanediol, and 1,6-hexanediol	—	80 (based on dry weight of coating)	0.05 (based on 1,6-hexanediol: SML); 5 (based on 2,2,4,4-tetramethyl-1,3-cyclobutanediol: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	Operating temperature shall not exceed 130℃; not permitted for use in the production of food contact materials and products specifically for infants and young children.
148	Polymers of terephthalic acid with isophthalic acid, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,4-cyclohexanediol, and 2-methyl-1,3-propanediol	—	80 (based on dry weight of coating)	5 (2,2,4,4-tetramethyl-1,3-cyclobutanediol: SML); 5 (2-methyl-1,3-propanediol: SML); 6 (trimethylolpropane: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	The operating temperature shall not exceed 130°C; it shall not be used in the production of food contact materials and products specifically for infants and young children; if it contains trimethylolpropane, its mass fraction shall not exceed 2%, otherwise there is no limit.
149	Polymers of terephthalic acid and isophthalic acid, cis-3,6-lactone-1,2,3,6-tetrahydrophthalic anhydride, 1,2,4,5-benzenetetrahydrophthalic anhydride, 1,4-cyclohexanediol and 2-methyl-1,3-propanediol	—	Use as needed for production	5 (2-methyl-1,3-propanediol: SML); 0.05 (cis-3,6-lactone-1,2,3,6-tetrahydrophthalic anhydride: SML); 0.05 (1,2,4,5-benzenetetrahydrophthalic anhydride, calculated as benzopyrene: SML);	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	
150	p-Cresol	106-44-5	Use as needed for				

			production				
151	p-tert-Butylphenol-terminated poly (4,4'-isopropylidene diphenyl carbonate)	103598-77-2	Use as needed for production	0.05 [4,4'-dihydroxydiphenylpropane/bisphenol A: SML]; 0.05 (p-tert-Butylphenol: SML); ND Carbohydrate dichloro: SML, DL= 0.01 (mg/kg) or 1 (Carbodichloro: QM); 0.005[1, 1, 1-tris (4-hydroxyphenyl) ethane: SML]			Not permitted for use in the production of food contact materials and products specifically for infants and young children; not permitted for use in contact with foods containing more than 50% (volume fraction) of ethanol; if it contains 1,1,1-tris (4-hydroxyphenyl) ethane, its content should be less than 2%, otherwise there is no need to limit its content; Carbodichloro readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
152	Diphenylmethane-4,4'-diisocyanate	101-68-8	Use as needed for production	1 (as isocyanate: QM)	ND (calculated as isocyanate, DL = 0.01 mg/kg)	17	
153	Diethylene glycol	111-46-6	Use as needed for production				
154	Xylene-formaldehyde polymer; Polymer of formaldehyde and 1,3-dimethylphenol	26139-75-3	Use as needed for production	3.0 (Free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	
155	The reaction product of dimethylethanolamine-neutralized glycidyl-terminated bisphenol A/epoxychloropropane	—	Used as needed for production	0.05 (2-ethylhexyl acrylate: SML); ND (epoxychloropropane: SML, DL=0.01mg/kg) or 1	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	It must not be used in contact with foods containing oils or fats, or foods with an ethanol content exceeding 15% (volume fraction); it must not

	copolymer with styrene, methyl methacrylate, 2-ethylhexyl acrylate, acrylic acid, and methacrylic acid			(epoxychloropropane: QM); 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); For relevant limits on bisphenol A diglycidyl ether (BADGE), see Note 2;			be used in the production of contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
156	Trans-butenedioic acid; (E)-2-butenedioic acid	110-17-8	Use as needed for production				
157	Polymer of trans-1,4-cyclohexanedicarboxylate and 1,4-cyclohexanediol	219566-57-1	Use as needed for production	5 (1,4-cyclohexanedicarboxylic acid: SML)			
158	Sebacic acid	111-20-6	Use as needed for production				
159	Polymer of sebacic acid with 2,2'-oxodiethanol, 1,2-ethylene glycol, isophthalic acid, 2,2-dimethyl-1,3-propanediol, and terephthalic acid	38497-35-7	Use as needed for production	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	Not for use in contact with ethanol-containing foods
160	Perchloroethylene polymer	—	Use as needed for production	ND (vinyl chloride: SML, DL=0.01mg/kg) or 1 (vinyl chloride: QM)			
161	Polymers containing 1-methyl-1-propyl 2-methyl-1,3-butadiene; copolymers of isoprene and isobutene	9010-85-9	Use as needed for production	ND (2-methyl-1,3-butadiene: SML, DL=0.01mg/kg) or 1 (2-methyl-1,3-butadiene: QM)			
162	Propylene oxide	75-56-9	Use as needed for production	ND (Propylene oxide: SML, DL=0.01mg/kg)			Propylene oxide readily reacts with water-based food

				or 1 (Propylene oxide: QM).			simulants; residue screening and migration can be used to verify compliance.
163	Epoxy polyamide resin	—	Use as needed for production	0.05 (2-ethylhexyl acrylate: SML); ND (epicochloropropane: SML, DL=0.01mg/kg) or 1 (epicochloropropane: QM); 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.	15 (calculated as caprolactam)	4	Not permitted for use in the production of food contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and compliance can be verified by residual screening migration; bisphenol A and related limits for BADGE only apply to bisphenol A type epoxy polyamide resins.
164	Polymers of epichlorohydrin with 4,4'-methylenebis (2,6-dimethylphenol) and hydroquinone	—	90 (based on dry weight of coating)	0.6 (hydroquinone: SML); ND (epimchlorohydrin: SML, DL = 0.01 mg/kg) or 1 (epimchlorohydrin: QM); 4,4'-methylenebis(2,6-dimethylphenol) (TMBPF) related limits are shown in Note 1.			It shall not be used in the production of food contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
165	Ethylene oxide	75-21-8	Use as needed for production	ND (Ethylene oxide: SML, DL = 0.01 mg/kg) or 1 (Ethylene oxide: QM)			Ethylene oxide readily reacts with water-based food simulants; its compliance can be verified by screening migration through residue levels.

166	Caprolactam homopolymer; Poly ε-caprolactam	25038-54-4	Use as needed for production	2.4 (1,6-hexanediamine: SML)	15 (calculated as caprolactam)	4	If it contains 1,6-hexanediamine, its mass fraction shall not exceed 2%; if it does not contain it, there is no limit.
167	Methacrylic acid	79-41-4	Use as needed for production		6 (calculated as methacrylamide)	23	
168	1,2-Ethylene glycol methacrylate	97-90-5	Use as needed for production	0.05 (1,2-Ethylene glycol methacrylate: SML)	6 (calculated as methacrylamide)	23	
169	Polymers of 2-(dimethylamino) ethyl methacrylate and methyl methacrylate	26222-42-4	Use as needed for production	ND [2-(dimethylamino) ethyl methacrylate: SML, DL = 0.01mg/kg]	6 (calculated as methacrylic acid)	23	
170	Polymers ammonium salts of methacrylic acid, ethyl acrylate, and methyl methacrylate	55989-05-4	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
171	Butyl methacrylate	97-88-1	Use as needed for production		6 (calculated as methacrylic acid)	23	
172	Polymers of butyl methacrylate, methyl methacrylate, and hydroxypropyl methacrylate	67874-31-1	Use as needed for production		6 (calculated as methacrylic acid)	23	
173	Polymers of butyl methacrylate with hydroxyethyl methacrylate, methyl methacrylate, and methacrylamide	394249-05-9	Use as needed for production	6 (hydroxyethyl methacrylate: SML); ND (methacrylamide: SML, DL=0.01mg/kg)	6 (calculated as methacrylic acid)	23	
174	Polymers of butyl methacrylate with ethylene, methyl methacrylate, and propylene	127104-68-1	Use as needed for production		6 (calculated as methacrylic acid)	23	
175	Polymers of ethylene oxide	26781-49-7	Use as needed for	0.02 (ethylene oxide			When ethylene oxide methyl

	methyl methacrylate with vinyl chloride and vinyl acetate		production	methyl methacrylate: SML); ND (vinyl chloride: SML, DL = 0.01 mg/kg) or 1 (vinyl chloride: QM); 12 (vinyl acetate: SML)			methacrylate can react with the food or food simulant it comes into contact with, use 0.02 mg/6 dm^2 (QM) as its limit value.
176	Methyl methacrylate	80-62-6	Use as needed for production		6 (calculated as methacrylic acid)	23	
177	Methyl methacrylate homopolymer; Polymethyl methacrylate	9011-14-7	Use as needed for production		6 (calculated as methacrylic acid)	23	
178	Polymers of methyl methacrylate with 1,3-butadiene, styrene, and acrylonitrile	9010-94-0	Use as needed for production	ND (1,3-butadiene: SML, DL = 0.01 mg/kg); ND (acrylonitrile: SML, DL = 0.01 mg/kg)	6 (calculated as methacrylic acid)	23	
179	Ammonium salts of methyl methacrylate polymers with styrene, 2-ethylhexyl acrylate, (1-methylvinyl) benzene, and acrylic acid; ammonium salts of methyl methacrylate polymers with styrene, 2-ethylhexyl acrylic acid, 2-phenylpropylene, and acrylic acid	492467-53-5	Use as needed for production	0.05 (2-ethylhexyl acrylate: SML); 0.05 (2-phenylpropylene: SML);	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid);	22; 23	
180	Polymers of methyl methacrylate with styrene and maleic anhydride	26809-51-8	Use as needed for production		30 (calculated as maleic acid); 6 (calculated as methacrylic acid)	3; 23	
181	Polymers of methyl methacrylate with butyl acrylate, butyl methacrylate and 2-(dimethylamino) ethyl	127573-73-3	Use as needed for production	ND [2-(dimethylamino) ethyl methacrylate: SML, DL = 0.01 mg/kg]	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	

	methacrylate						
182	Copolymer of methyl methacrylate, methyl acrylate, and ammonium acrylate	38811-87-9	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
183	Polymers of methyl methacrylate and ethyl acrylic acid	9010-88-2	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
184	Polymers of methyl methacrylate, ethyl acrylic acid, and acrylic acid	25135-39-1	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
185	Glyceryl methacrylate	106-91-2	5.6 (based on dry weight of coating)	0.02 (glyceryl methacrylate: SML)	6 (calculated as methacrylic acid)	23	When glyceryl methacrylate can react with the food or food simulant it comes into contact with, use 0.02 mg/6 dm^2 (QM) as its limit value.
186	Polymers of ethyl methacrylate with acrylonitrile and acrylic acid	24981-02-0	Use as needed for production	ND (acrylonitrile: SML, DL=0.01mg/kg)	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
187	Polymers of ethyl methacrylate and methyl acrylate	26572-20-3	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
188	Isobutyl methacrylate	97-86-9	Use as needed for production		6 (calculated as methacrylic acid)	23	
189	Polymers of methacrylic acid with N-(butoxymethyl)-2-acrylamide, styrene, and ethyl acrylate	26589-46-8	Use as needed for production	ND [N-(butoxymethyl)-2-acrylamide, DL = 0.01 mg/kg: SML]	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	The operating temperature shall not exceed 121℃; it shall not be used in contact with oil/fat-containing foods; it shall not be used in the

							production of food contact materials and products specially for infants and young children.
190	Polymers of methacrylic acid with hydroquinone, epichlorohydrin, butyl methacrylate, ethyl methacrylate, ethyl acrylate, acrylates, and 4,4'-methylenebis (2,6-dimethylphenol), quaternized dimethylamine ethanol	—	Use as needed for production	0.6 (hydroquinone: SML); ND (epicochlorohydrin: SML, DL = 0.01 mg/kg) or 1 (epicochlorohydrin: QM); 4,4'-methylene bis (2,6-dimethylphenol) (TMBPF) related limits are shown in Note 1.	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid: SML)	22; 23	Not permitted for use in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
191	Polymers of methacrylic acid and 2,2'- [(1-methylethylidene) bis(4,1-phenyleneoxymethylene)] bis (epoxyethylene)	26875-67-2	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (epoxychloropropane, SML: DL=0.01 mg/kg) or 1 (epoxychloropropane: QM); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.	6 (calculated as methacrylic acid)	23	Not to be used in the production of food contact materials and products specifically for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
192	Polymers of methacrylic acid with styrene, 2-ethylhexyl acrylate and methyl methacrylate	28377-44-8	Use as needed for production	0.05 (2-ethylhexyl acrylate: SML)	6 (calculated as methacrylic acid)	23	
193	Polymers ammonium salts of	665004-50-2	Use as needed for	0.05 (2-	6 (calculated as	22; 23	

	methacrylic acid with butyl acrylate, styrene, (1-methylvinyl) benzene and methyl methacrylate; Polymer ammonium salts of methacrylic acid with butyl acrylate, styrene, 2-phenylenepropylene and methyl methacrylate		production	phenylenepropylene: SML)	acrylic acid); 6 (calculated as methacrylic acid)		
194	Polymers of methacrylic acid with butyl acrylate and methyl methacrylate	25035-69-2	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
195	Polymers of methacrylic acid with ethyl acrylate, methyl methacrylate, and acrylic acid	25053-63-8	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
196	Polymers of methacrylic acid with ethyl acrylate and methyl methacrylate	25133-97-5	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
197	The reaction products of polymers of methacrylic acid with hydroquinone, epichlorohydrin, styrene, ethyl acrylate, and di- 4,4'-methylenebis (2,6-dimethylphenol) and dimethylaminoethanol	—	75 (based on dry weight of coating)	0.6 (hydroquinone: SML); 18 (dimethylaminoethanol: SML); 4,4'-methylenebis (2,6-dimethylphenol) (TMBPF) related limits are shown in Note 1.	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	Not for use in contact with oil/fat-containing foods; not for use in the production of food contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
198	The reaction products of	—	85 (based on	ND	6 (calculated as	22; 23	It must not be used in the

	polymers of methacrylic acid with butyl methacrylate, epichlorohydrin, styrene, ethyl acrylate, 4,4'-dihydroxydiphenylpropane and acrylic acid with 2-(dimethylamino) ethanol; the reaction products of polymers of methacrylic acid with butyl methacrylate, epichlorohydrin, styrene, ethyl acrylate, bisphenol A and acrylic acid with 2-(dimethylamino) ethanol		coating formulation)	(epoxychloropropane, SML: DL = 0.01 mg/kg) or 1 (epoxychloropropane: QM); 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 18 [2-(dimethylamino) ethanol: SML]; Bisphenol A diglycidyl ether (BADGE) and other related limits are shown in Note 2.	acrylic acid); 6 (calculated as methacrylic acid)		production of food contact materials and products specifically for infants and young children; the operating temperature must not exceed 130℃; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
199	Polymers of methacrylic acid with butyl methacrylate and methyl methacrylate	28262-63-7	Use as needed for production		6 (calculated as methacrylic acid)	23	
200	Polymers of methacrylic acid and methyl methacrylate	25608-33-7	Use as needed for production		6 (calculated as methacrylic acid)	23	
201	Polymer of methacrylic acid, methyl methacrylate, and acrylic acid	39332-53-1	16.3 (based on dry weight of coating)		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	Operating temperature must not exceed 130℃; not permitted for use in the production of food contact materials and products specifically for infants and young children.
202	Polymers of methacrylic acid with methyl methacrylate and methyl acrylate	26936-24-3	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	Operating temperature shall not exceed 100℃.
203	Methacrylamide	79-39-0	Use as needed for production	ND (Methacrylamide: SML, DL = 0.01 mg/kg)			
204	A copolymer of methylated 1,3,5-triazine-2,4,6-triamine	68002-20-0	Use as needed for production	2.5 (melamine: SML)	15 (calculated as formaldehyde)	15	When used in the production of food contact materials and

	and formaldehyde; a copolymer of methylated melamine and formaldehyde						products for infants and young children, the melamine SML is 1 mg/kg.
205	Formaldehyde	50-00-0	Use as needed for production		15 (calculated as formaldehyde)	15	
206	Polymers of formaldehyde and 2-cresol	25053-96-7	Use as needed for production	3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	
207	Polymer of formaldehyde, phenol, and p-tert-butylphenol:	28453-20-5	Use as needed for production	0.05 (p-tert-butylphenol: SML); 3.0 (free phenol, calculated as phenol: SML);	15 (calculated as formaldehyde)	15	
208	Formaldehyde homopolymer; Polyoxymethylene	9002-81-7	Use as needed for production		15 (calculated as formaldehyde)	15	Operating temperature should not exceed 121℃.
209	Butyl ether of formaldehyde with polymers of 2-methylphenol, 3-methylphenol, and 4-methylphenol	298689-79-9	5 (based on dry weight of coating)	3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	Operating temperature must not exceed 121℃.
210	Butyl ether of formaldehyde with polymers of 4,4'-dihydroxydiphenylpropane, 3-methylphenol, and 4-methylphenol; Butyl ether of formaldehyde with polymers of bisphenol A, 3-methylphenol, and 4-methylphenol	335637-88-2	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	Not permitted for use in the production of food contact materials and products specifically for infants and young children.
211	The reaction products of formaldehyde with 4,4'-dihydroxydiphenylpropane and butanol; the reaction products of formaldehyde with bisphenol A and butanol	68954-38-1	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML)	15 (calculated as formaldehyde)	15	Not permitted for use in the production of food contact materials and products specifically for infants and young children.
212	Butyl ether of formaldehyde	68002-26-6	Use as needed for	5 (Butyl	15 (calculated as	15	

	and 6-phenyl-1,3,5-triazine-2,4-diamine polymers; Butyl ether of formaldehyde and benzo [a] melamine polymers		production	benzo[a]melamine: SML)	formaldehyde)		
213	Polymers of formaldehyde with phenol, p-tert-butylphenol and n-butanol	2215936-67-5	9.5 (based on coating formulation)	0.05 (p-tert-butylphenol: SML); 3.0 (free phenol, based on phenol: SML)	15 (calculated as formaldehyde)	15	
214	Polymers of formaldehyde with p-tert-butylphenol and 4,4'-dihydroxydiphenylpropane; polymers of formaldehyde with p-tert-butylphenol and bisphenol A	54579-44-1	15 (based on dry weight of coating)	0.05 (p-tert-butylphenol: SML); 0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML)	15 (calculated as formaldehyde)	15	Operating temperature must not exceed 130℃; not permitted for use in the production of food contact materials and products specially for infants and young children.
215	Polymers of formaldehyde with p-tert-butylphenol and tricresol	67970-32-5	Use as needed for production	0.05 (p-tert-butylphenol: SML); 3.0 (free phenol, calculated as phenol: SML);	15 (calculated as formaldehyde)	15	
216	Polymers of formaldehyde and cyclohexanone	25054-06-2	Use as needed for production		15 (calculated as formaldehyde)	15	Not for use in contact with ethanol-containing foods and oil/fat-containing foods.
217	Formaldehyde polymerized with epichlorohydrin and phenol	9003-36-5	Use as needed for production	ND (epichlorohydrin: SML, DL = 0.01 mg/kg) or 1 (epichlorohydrin: QM); 3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	Epichlorohydrin readily reacts with water-based food simulants; its compliance can be verified by screening migration through residue levels.
218	Polymers of formaldehyde and tricresol	9016-83-5	19 (based on coating formulation)	3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	
219	The reaction product of formaldehyde with n-butanol and phenol	96446-41-2	10.8 (based on coating formulation)	3.0 (free phenol, calculated as phenol: SML)	15 (calculated as formaldehyde)	15	The operating temperature must not exceed 121℃.

220	Homopolymer of methyl ethyl ketone oxime-terminated -1-isocyanate-3-isocyanate-methyl- 3,5,5-trimethylcyclohexane	103170-26-9	15 (based on coating formulation)	0.05 (Trimmer of methyl ethyl ketone oxime-terminated -1-isocyanate-3-isocyanate-methyl-3,5,5-trimethylcyclohexane: SML)			Not permitted for use in the production of food contact materials and products specifically for infants and young children.
221	Polymers of m-phenylenediamine and 1,6-hexamethylenediamine	25718-70-1	Use as needed for production	0.05 (m-phenylenediamine: SML)			
222	Isophthalic acid	121-91-5	Use as needed for production		5 (calculated as isophthalic acid)	27	
223	Polymers of isophthalic acid, terephthalic acid, 1,6-adipic acid, trimethylolpropane, 2-methyl-1,3-propanediol, and 1,2-ethylene glycol	—	81 (based on dry weight of coating)	6 (trimethylolpropane: SML); 5 (2-methyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (based on isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
224	Copolymers of isophthalic acid, terephthalic acid, sebacic acid and 1,4-butanediol	25214-81-7	25 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	27; 28; 30	Operating temperature shall not exceed 121℃.
225	Polymers of isophthalic acid with 1,4-butanediol, dimethyl terephthalate and 1,6-adipic acid)	82076-69-5	80 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	27; 28; 30	When in contact with protein beverages, the usage temperature shall not exceed 121℃; when in contact with other types of food, the usage temperature shall not exceed 130℃.
226	Polymers of isophthalic acid	—	3.5 (based on dry	5 (2-methyl-1,3-	30 (calculated as	3; 27	

	with maleic anhydride, phthalic anhydride, phosphoric acid, trimethylolpropane and 2-methyl-1,3-propanediol		weight of coating)	propanediol: SML); 6 (Trimethylolpropane: SML)	maleic acid); 5 (calculated as isophthalic acid)		
227	Polymers of isophthalic acid with 1,4-butanediol, dimethyl 1,4-phthalate, 1,6-hexamethylenediol, and 1,3-propanediol; polymers of 1,3-phthalic acid with 1,4-butanediol, 1,4-phthalic acid, 1,6-hexamethylenediol, and 1,3-propanediol	1082203-23-3	Use as needed for production	0.05 (1,3-propanediol: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	27; 28; 30	Not for use in contact with ethanol-containing foods.
228	Polymers of isophthalic acid with 2,2-dimethyl-1,3-propanediol, 1,2-ethylene glycol, and 1,6-hexanediol	58481-50-8	10 (based on coating formulation)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid)	2;27	Not permitted for use in the production of food contact materials and products specifically for infants and young children.
229	Polymers of isophthalic acid with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexamethylenediol, and 1,2-propanediol	26282-28-0	Use as needed for production	6 (trimethylolpropane: SML)	5 (calculated as isophthalic acid)	27	
230	Polymers of isophthalic acid with terephthalic acid, 1,2-ethylene glycol, 1,6-adipic acid and azelaic acid	54688-53-8	Use as needed for production		30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
231	Polymers of isophthalic acid with terephthalic acid, 1,2-ethylene glycol and azelaic acid	26336-35-6	Use as needed for production		30 (calculated as ethylene glycol); 5 (calculated as	2; 27; 28	

					isophthalic acid); 7.5 (calculated as terephthalic acid)		
232	Polymers of isophthalic acid with terephthalic acid, 1,3-dihydro-1,3-dioxo-5-isobenzofuran carboxylic acid, 1,6-adipic acid, 2-methyl-1,3-propanediol and 2,2'-oxobis [ethanol]	1013326-79-8	18.5 (based on dry weight of coating)	5 (2-methyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol: SML); 5 (calculated as trimellitic acid); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 21; 27; 28	Not for use in contact with ethanol-containing foods; not for use in the production of food contact materials and products specifically for infants and young children; operating temperature not exceeding 121℃.
233	Polymers of isophthalic acid with terephthalic acid, 1,4-butanediol, 1,2-ethylene glycol, and 1,6-hexanediol	72229-82-4	50 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	2; 27; 28; 30	Not for use in contact with ethanol-containing foods; operating temperature not exceeding 121℃.
234	A copolymer of isophthalic acid with terephthalic acid, 1,4-butanediol, 1,2-propanediol, and 1,6-hexanediol	95505-95-6	60 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	27; 28; 30	Not for use in contact with food containing more than 20% (volume fraction) of ethanol; operating temperature not exceeding 121℃.
235	Polymers of isophthalic acid with terephthalic acid, 1,4-butanediol, sebacic acid and 1,2-ethylene glycol	61039-00-7	50 (based on coating formulation)	0.6 (tetrahydrofuran: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5	2; 27; 28; 30	Not permitted for use in the production of food contact materials and products specially for infants and young children; operating temperature not exceeding 130℃.

					(calculated as 1,4-butanediol)		
236	Polymers of isophthalic acid with terephthalic acid, 1,4-butanediol and 1,6-adipic acid	66027-02-9	40 (based on dry weight of coating)	0.6 (tetrahydrofuran: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid); 5 (calculated as 1,4-butanediol)	2; 27; 28; 30	The operating temperature shall not exceed 121℃, and it is only for use in contact with food containing no more than 20% (volume fraction) of ethanol.
237	Polymers of isophthalic acid with terephthalic acid, 1,4-di (hydroxymethyl) cyclohexane and 2-methyl-1,3-propanediol	164002-50-0	85 (based on dry weight of coating)	5 (2-methyl-1,3-propanediol: SML)	5 (calculated as trimellitic acid); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	21; 27; 28	The content of trimellitic anhydride shall not exceed 2% (mass fraction); if it is not present, there is no limit.
238	Polymers of isophthalic acid with terephthalic acid, 1,4-cyclohexanediol, 2,2-dimethyl-1, 3-propanediol and 1, 2-ethylene glycol	61960-52-9	35 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	The operating temperature shall not exceed 130 ℃; the content of 2,2-dimethyl-1,3-propanediol shall not exceed 30% (mass fraction).
239	Polymers of isophthalic acid with terephthalic acid, 2,2-dimethyl-1, 3-propanediol, 1,2-ethylene glycol, and 1,6-hexanediol	40471-06-5	Use as needed for production	0.05 (1,6-hexanediol: SML); 0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
240	Polymers of isophthalic acid with terephthalic acid, 2,2-dimethyl-1, 3-propanediol and 1,2-ethylene glycol	27923-68-8	Use as needed for production	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid);	2; 27; 28	Not for use in contact with ethanol-containing foods.

					7.5 (calculated as terephthalic acid)		
241	Polymers of isophthalic acid with terephthalic acid, sebacic acid, 1,2-ethylene glycol and 1,6-adipic acid	28902-18-3	Use as needed for production		30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
242	Polymers of isophthalic acid with terephthalic acid, sebacic acid, 2,2-dimethyl-1,3-propanediol, 1,2-ethylene glycol and trimethylolpropane	253780-96-0	70 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML); 6 (trimethylolpropane: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
243	Polymers of isophthalic acid with terephthalic acid, sebacic acid, 2,2-dimethyl-1,3-propanediol and 1,2-ethylene glycol	26353-05-9	85 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	The operating temperature shall not exceed 127 ℃; the content of 2,2-dimethyl-1,3-propanediol shall not exceed 30% (mass fraction).
244	Polymers of isophthalic acid with terephthalic acid, trimethylolpropane, and diethylene glycol	484674-92-2	Use as needed for production	6 (trimethylolpropane: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	
245	Polymer of isophthalic acid with dimethyl terephthalate, 2,2-dimethyl-1,3-propanediol and 1,2-ethylene glycol	35176-78-4	20 (based on coating formulation)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	The operating temperature shall not exceed 130℃; it shall not be used in contact with food containing more than 20% (volume fraction) of ethanol; it shall not be used in the production of food contact

							materials and products specifically for infants and young children.
246	Polymer of isophthalic acid with sebacic acid, dimethyl terephthalate, 2,2-dimethyl-1,3-propanediol and 1,2-ethylene glycol	61412-73-5	85 (based on dry weight of coating)	0.05 (2,2-dimethyl-1,3-propanediol: SML)	30 (calculated as ethylene glycol); 5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	2; 27; 28	The operating temperature shall not exceed 127 ℃; the content of 2,2-dimethyl-1,3-propanediol shall not exceed 30% (mass fraction).
247	Polymers of isophthaloyl chloride with terephthaloyl chloride, resorcinol, carbamate, 4,4'-dihydroxydiphenylpropane, and 4-(1-methyl-1-phenylethyl) phenyl ester; Polymers of isophthaloyl chloride with terephthaloyl chloride, resorcinol, carbamate, bisphenol A, and 4-(1-methyl-1-phenylethyl) phenyl ester	235420-85-6	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (carbonyl dichloro: SML, DL=0.01 mg/kg) or 1 (carbonyl dichloro: QM); 0.05 [4-(1-methyl-1-phenylethyl) phenol: SML]; 2.4 (resorcinol: SML);	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid);	27; 28	It must not be used in the production of food contact materials and products specially for infants and young children; it must not be used in contact with foods containing more than 50% (volume fraction) of ethanol; carbohydrate dichloride reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
248	Polymers of isophthaloyl chloride with terephthaloyl chloride, carbamate, 4,4'-dihydroxydiphenylpropane and 4-(1-methyl-1-phenylethyl) phenol; polymers of isophthaloyl chloride with terephthaloyl chloride, carbamate, bisphenol A and 4-	114096-64-9	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (carbamate: SML, DL=0.01mg/kg) or 1 (carbamate: QM); 0.05 [4-(1-methyl-1-phenylethyl) phenol: SML]	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	It must not be used in the production of food contact materials and products specially for infants and young children; it must not be used in contact with foods containing more than 50% (volume fraction) of ethanol; carbohydrate dichloride readily

	(1-methyl-1-phenylethyl) phenol						reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
249	Polymers of isophthaloyl chloride with terephthaloyl chloride, carbamate, and 4,4'-dihydroxydiphenylpropane; polymers of isophthaloyl chloride with terephthaloyl chloride, carbamate, and bisphenol A	71519-80-7	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (carbamate: SML, DL=0.01mg/kg) or 1 (carbamate: QM)	5 (calculated as isophthalic acid); 7.5 (calculated as terephthalic acid)	27; 28	Not to be used in the production of food contact materials and products specially for infants and young children; Not to be used in contact with foods containing more than 50% (volume fraction) of ethanol; Carbamate readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
250	m-Cresol	108-39-4	Use as needed for production	3.0 (Free phenol, calculated as phenol: SML)			
251	Poly (2,6-dimethyl-1,4-phenylene ether)	25134-01-4	Use as needed for production	0.05 (2,6-dimethyl-1,4-benzenediol: SML)			
252	Polyacrylic acid; homopolymer of acrylic acid	9003-01-4	Use as needed for production		6 (calculated as acrylic acid)	22	
253	Polyazidotridecane-2-one	25038-74-8	Use as needed for production	5 (Azatridecane-2-one: SML)			
254	Polybutylene succinate	25777-14-4	Use as needed for production		5 (calculated as 1,4-butanediol)	30	Operating temperature should not exceed 100℃.
255	Polybutylene terephthalate (PET)-polytetrahydrofuran ether (PTFE) block copolymer	1224447-95-3	Use as needed for production	0.6 (tetrahydrofuran: SML)	30 (calculated as maleic anhydride); 7.5 (calculated as	3; 28; 30	Operating temperature must not exceed 121℃.

	with maleic anhydride				terephthalic acid); 5 (calculated as 1,4-butanediol)		
256	Polyethylene terephthalate	25038-59-9	Use as needed for production		30 (calculated as ethylene glycol); 7.5 (calculated as terephthalic acid)	2; 28	
257	Polymerized rosin	65997-05-9	Use as needed for production				
258	Polymethylphenylsiloxane	—	Use as needed for production				
259	Polymethylsiloxane	—	Use as needed for production				
260	Polyvinyl chloride	9002-86-2	50 (based on dry weight of coating)	ND (vinyl chloride: SML, DL=0.01mg/kg) or 1 (vinyl chloride: QM); ND (1,1-dichloroethane: SML, DL=0.01mg/kg) or 5 (1,1-dichloroethane: QM).			Operating temperature must not exceed 127℃; for single use only.
261	Polylactic acid	9051-89-2	Use as needed for production				Operating temperature should not exceed 100℃.
262	Polycarbonate	25037-45-0	Use as needed in production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML)			Must not be used in food containing more than 50% (volume fraction) of ethanol.
263	Poly (ethylene oxide) or Polyethylene oxide	68441-17-8	50 (based on dry weight of coating)	ND (Ethylene oxide: SML, DL=0.01mg/kg) or 1 (Ethylene oxide: QM)			Ethylene oxide readily reacts with water-based food simulants; its compliance can be verified by screening migration through residue levels.
264	o-Cresol	95-48-7	Use as needed for	3.0 (Free phenol,			

			production	calculated as phenol: SML)			
265	Phosphoric acid	7664-38-2	Use as needed for production				
266	Hexamethylenetetramine	100-97-0	Use as needed for production		15 (calculated as formaldehyde)	15	
267	Polymers of vinyl chloride, vinyl acetate, and maleic acid	9005-09-8	4.5 (based on dry weight of coating)	ND (vinyl chloride: SML, DL=0.01mg/kg) or 1 (vinyl chloride: QM); 12 (vinyl acetate: SML)	30 (calculated as maleic acid)	3	
268	Polymers of urea with formaldehyde and 4,4'-dihydroxydiphenylpropane; polymers of urea with formaldehyde and bisphenol A	—	16 (based on dry weight of coating)	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML)	15 (calculated as formaldehyde)	15	Not permitted for use in the production of food contact materials and products specifically for infants and young children; operating temperature not exceeding 290℃.
269	Isobutylated ether of urea and formaldehyde polymers	68002-18-6	Use as needed for production		15 (calculated as formaldehyde)	15	
270	Polymers of hydrogenated unsaturated C_{18} fatty acid dimers, 1,4-cyclohexanediol, 1,2-ethylene glycol, hexahydro-2-oxo-N-{3,3,5-trimethyl-5-[(tetrahydro-3,5-bis ((5-isocyano-1,3,3-trimethylcyclohexyl)methyl)-2,4,6-trioxo-1,3,5-triazine) methyl]cyclohexyl}-1H-achengein-1-formamide, isophthalic acid, and 2,2-	—	Use as needed for production	0.05 (2,2-dimethyl-1,3-propanediol: SML); 1 (1,3,3-trimethyl-5-isocyano-1-isocyanomethylcyclohexane: QM);	30 (calculated as ethylene glycol); 15 (calculated as caprolactam); 5 (calculated as isophthalic acid: SML);	2; 4; 27	For use only in contact with water-based foods and foods with an ethanol content not exceeding 15%; not for use in the production of food contact materials and articles specially for infants and young children.

	dimethyl-1,3-propanediol						
271	Hydrogenated aromatic petroleum hydrocarbons resin	88526-47-0	Use as needed for production				Made from aliphatic, alicyclic, and/or monobenzene ring aromatic chain dienes and olefins in cracked petroleum fractions with a boiling range not exceeding 220 °C, and monomers in the fractions through catalytic or thermal polymerization and distillation, hydrogenation, and other processes. Properties: when temperature is above 120 °C, viscosity >3 Pa·s at; softening temperature >95 °C; bromine value <40; color of a 50% toluene solution of this substance should be <11 (Gardner Color Scale); residual aromatic monomer content ⩽ 50 mg/kg.
272	Hydrogenated resin acids and rosin acids glycerides	65997-13-9	Use as needed for production				
273	Triethanolamine	102-71-6	Use as needed for production	0.05 (triethanolamine: SML)			
274	Copolymers of sorbic acid with 4,4’-dihydroxydiphenylpropane, epoxy resin, styrene, methyl methacrylate, acrylic acid, methacrylic acid, ethyl acrylate, and partially neutralized dimethylethanolamine; copolymers of sorbic acid with	—	Use as needed for production	0.05 (4,4’-dihydroxydiphenylpropane/bisphenol A: SML); 6 [2-(dimethylamino) ethanol: SML]; Bisphenol A diglycidyl ether (BADGE), etc. See Note 2 for relevant	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	Not permitted for use in the production of contact materials and products specially for infants and young children.

	bisphenol A, epoxy resin, styrene, methyl methacrylate, acrylic acid, methacrylic acid, ethyl acrylate, and partially neutralized dimethylethanolamine			limits.			
275	Resin acid and rosin acid pentaerythritol ester	8050-26-8	Use as needed for production				
276	Maleic anhydride	108-31-6	Use as needed for production		30 (calculated as maleic anhydride)	3	
277	Ester of the polymer of maleic anhydride and ethylene with the homopolymer of vinyl alcohol	76930-37-5	Use as needed for production	12 (vinyl acetate: SML)	30 (calculated as maleic anhydride)	3	For Nylon 6 only, operating temperature must not exceed 121℃; not for use in the production of food contact materials and products for infants and young children.
278	Tetrafluoroethylene homopolymer; Polytetrafluoroethylene	9002-84-0	Use as needed for production	0.05 (Tetrafluoroethylene: SML); ND [calculated as Cr (VI), DL = 0.01mg/kg, SML]; 0.2 (Fluorine: SML)			Operating temperature must not exceed 250℃.
279	Polymers of tetrafluoroethylene and 1,1,1,2,2,3,3-heptafluoro-3-[trifluorovinyl) oxy] propane	26655-00-5	Use as needed for production	0.05 (tetrafluoroethylene: SML); 0.05 (1,1,1,2,2,3,3-heptafluoro-3-[trifluorovinyl) oxy] propane: SML); ND [as Cr (VI): DL=0.01mg/kg, SML]; 0.2 (fluorine: SML)			
280	Polymers of tetrafluoroethylene	25067-11-2	Use as needed for	0.05			

	and hexafluoropropylene		production	(tetrafluoroethylene: SML); 0.01 (hexafluoropropylene: SML); ND [calculated as Cr (VI), DL=0.01mg/kg, SML]; 0.2 (fluorine: SML)			
281	Polymers of tetrafluoroethylene and pentafluoroethyl trifluorovinyl ether	31784-04-0	Use as needed for production	0.05 (tetrafluoroethylene: SML); ND [calculated as Cr (VI), DL = 0.01mg/kg, SML]; 0.2 (fluorine: SML)			
282	Polymers of tetrafluoroethylene with ethylene and 3,3,4,4,5,5,6,6,6-nonafluoro-1-hexene	68258-85-5	Use as needed for production	0.05 (tetrafluoroethylene: SML); ND [calculated as Cr (VI), DL = 0.01mg/kg, SML]; 0.2 (fluorine: SML)			
283	Tetrahydrofuran	109-99-9	Use as needed for production	0.6 (Tetrahydrofuran: SML)			
284	Rosin Glyceryl Ester	8050-31-5	Use as needed for production				
285	Epichlorohydrin and bisphenol A diglycidyl ether copolymer terminated with glycidyl groups; polymer of 4, 4'-(1-methylethylidene) diphenol and 2, 2'-[(1-methylethylidene) bis (4,1-phenyleneoxymethylene)] bis (oxirane).	25036-25-3	Use as needed for production	0.05 (4,4'-dihydroxydiphenylpropane/bisphenol A: SML); ND (epicochlorohydrin: SML, DL=0.01mg/kg) or 1 (epicochlorohydrin: QM); Bisphenol A diglycidyl ether (BADGE) and other related limits are shown			Not permitted for use in the production of food contact materials and products specially for infants and young children; epichlorohydrin readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.

				in Note 2.			
286	Polymers of carbamate dichloride with 4,4'-cyclohexanediylbis (2-methylphenol), 4,4'-dihydroxydiphenylpropane, and bis [4-(1-methyl-1-phenylethyl) phenyl] ester; Polymers of carbamate dichloride with 4,4'-cyclohexanediylbis (2-methylphenol), bisphenol A, and bis [4-(1-methyl-1-phenylethyl) phenyl] ester	411234-34-9	Use as needed for production	ND (carbamate dichloride: SML, DL=0.01mg/kg) or 1 (carbamate dichloride: QM); 0.05 [4,4'-dihydroxydiphenylpropane/bisphenol A: SML); 3.0 (free phenol, calculated as phenol: SML); 0.05 [4-(1-methyl-1-phenylethyl) phenol: SML]			It must not be used in the production of food contact materials and products specially for infants and young children; it must not be used in contact with foods containing more than 50% (volume fraction) of ethanol; carbohydrate dichloride readily reacts with water-based food simulants, and its compliance can be verified by screening migration through residue levels.
287	Tocopherol fatty acid	61790-12-3	Use as needed for production				
288	Amorphous hydride	—	Use as needed for production				Applied using microwave plasma technology, with acetylene gas as the carbon source, as a coating on the surface of PET containers. The thickness must not exceed 0.15 μm; the operating temperature must not exceed 100℃.
289	Ethanolamine	141-43-5	Use as needed for production	0.05 (ethanolamine: SML)			Do not use in contact with foods containing oil or fat.
290	Polymers of ethylated methylated formaldehyde and 6-phenyl-1,3,5-triazine-2,4-diamine	68037-08-1	Use as needed for production		15 (calculated as formaldehyde)	15	
291	Polymers of butanolized urea and formaldehyde	68002-19-7	Use as needed for production		15 (calculated as formaldehyde)	15	

292	Vinyl acetate	108-05-4	Use as needed for production	12 (vinyl acetate: SML)			
293	Copolymers of vinyl acetate with vinyl chloride, fumaric acid, and glycidyl methacrylate; copolymers of vinyl acetate with vinyl chloride, fumaric acid, and glycidyl methacrylate	—	Use as needed for production	12 (vinyl acetate: SML); ND (vinyl chloride, DL=0.01 mg/kg: SML) or 1 (vinyl chloride, QM); 0.02 (ethylene oxide methyl methacrylate: SML)			When ethylene oxide methyl methacrylate can react with the food or food simulant it comes into contact with, use 0.02 mg/6 dm^2 (QM) as its limit value.
294	Polymers of vinyl acetate and vinyl chloride	9003-22-9	Use as needed for production	12 (vinyl acetate: SML); ND (vinyl chloride: SML, DL = 0.01 mg/kg) or 1 (vinyl chloride, QM)			
295	Ethylene	74-85-1	Use as needed for production				
296	Vinyl alcohol homopolymer	9002-89-5	Use as needed for production	12 (vinyl acetate: SML)			For contact with dry foods and oil/fat-containing foods with low moisture content only; Operating temperature should not exceed 100℃.
297	Ethylene-vinyl acetate polymer	24937-78-8	Use as needed for production	12 (vinyl acetate: SML)			
298	Ethylene-vinyl acetate-vinyl alcohol polymer	26221-27-2	Use as needed for production	12 (vinyl acetate: SML)			Do not use in contact with food containing ethanol.
299	Polymers of ethylene with 1-propylene and 1-hexene	25895-46-9	Use as needed for production	3 (1-hexene: SML)			
300	Polymers of ethylene with 1-propylene and maleic anhydride	31069-12-2	Use as needed for production		30 (calculated as maleic acid)	3	
301	Polymers of ethylene with 1-	106177-14-4	Use as needed for		30 (calculated as	3	

	propylene and maleic anhydride		production		maleic acid)		
302	Polymers of ethylene and 1-butene	9019-29-8	Use as needed for production				
303	Polymers of ethylene and 1-butene	25087-34-7	Use as needed for production				
304	Polymers of ethylene and 1-butene	9019-29-8	Use as needed for production				
305	Polymers of ethylene with 1-butene and maleic anhydride	63625-36-5	Use as needed for production		30 (calculated as maleic anhydride)	3	
306	Polymers of ethylene with 1-hexene, 1-propene, and maleic anhydride	85023-55-8	Use as needed for production	3 (1-hexene: SML)	30 (calculated as maleic acid)	3	
307	Polymers of ethylene and 1-hexene	25213-02-9	Use as needed for production	3 (1-hexene: SML)			
308	The reaction product of the polymer of ethylene and 1-hexene with maleic anhydride	108388-93-8	Use as needed for production	3 (1-hexene: SML)	30 (calculated as maleic acid)	3	
309	Polymers of ethylene with 1-hexene and 1-butene	60785-11-7	Use as needed for production	3 (1-hexene: SML)			
310	Polymers of ethylene and 1-octene	26221-73-8	Use as needed for production	15 (1-octene: SML)			
311	Polymers of ethylene with 1-octene and maleic anhydride	85244-45-7	Use as needed for production	15 (1-octene: SML)	30 (calculated as maleic acid)	3	
312	The reaction product of ethylene and 1-octene polymer with maleic anhydride	114571-44-7	Use as needed for production	15 (1-octene: SML)	30 (calculated as maleic acid)	3	
313	Polymers of ethylene and methacrylic acid	25053-53-6	Use as needed for production		6 (calculated as methacrylic acid)	23	
314	Polymers of ethylene and 4-	25213-96-1	Use as needed for	0.05 (4-methyl-1-			

	methyl-1-pentene		production	pentene: SML)			
315	Polymers of ethylene and propylene	9010-79-1	Use as needed for production				
316	Polymers of ethylene and acrylic acid	9010-77-9	Use as needed for production		6 (calculated as acrylic acid)	22	
317	Polymers of ethylene and butyl acrylate	25750-84-9	Use as needed for production		6 (calculated as acrylic acid)	22	
318	Polymers of ethylene with butyl acrylate and maleic anhydride	64652-60-4	Use as needed for production		30 (calculated as maleic acid); 6 (calculated as acrylic acid)	3; 22	
319	Polymers of ethylene, butyl acrylate, and carbon monoxide	61843-70-7	Use as needed for production		6 (calculated as acrylic acid)	22	
320	Polymers of ethylene and methyl acrylate	25103-74-6	Use as needed for production		6 (calculated as acrylic acid)	22	
321	Polymers of ethylene with methyl acrylate and maleic anhydride	88450-35-5	Use as needed for production		30 (calculated as maleic acid); 6 (calculated as acrylic acid)	3; 22	
322	Lithium salt of polymers of ethylene and acrylic acid	25702-94-7	Use as needed for production	0.6 (lithium: SML)	6 (calculated as acrylic acid)	22	
323	Sodium salt of polymers of ethylene and acrylic acid	25750-82-7	Use as needed for production		6 (calculated as acrylic acid)	22	
324	Zinc salt of polymers of ethylene and acrylic acid	28208-80-2	Use as needed for production	5 (Zinc acetate: SML, calculated as zinc)	6 (calculated as acrylic acid)	22	
325	Polymers of ethylene and ethyl acrylate	9010-86-0	Use as needed for production		6 (calculated as acrylic acid)	22	
326	Polymers of ethylene and	26007-43-2	Use as needed for	0.05 (bicyclo [2,2,1]			

	bicyclo [2,2,1] hepta-2-ene		production	hepta-2-ene: SML)			
327	Sodium salt of ethylene with methacrylic acid and butyl acrylate polymers	52255-42-2	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
328	Polymers of ethylene with methacrylic acid and isobutyl acrylate	37433-35-5	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
329	Potassium salts of ethylene with polymers of methacrylic acid and isobutyl acrylate	93228-27-4	Use as needed for production		6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
330	Zinc salts of ethylene with polymers of methacrylic acid and isobutyl acrylate	61843-71-8	Use as needed for production	5 (zinc acetate, calculated as zinc: SML)	6 (calculated as acrylic acid); 6 (calculated as methacrylic acid)	22; 23	
331	Potassium salt of polymers of ethylene and methacrylic acid	26376-80-7	Use as needed for production		6 (calculated as methacrylic acid)	23	
332	Sodium salt of polymers of ethylene and methacrylic acid	25608-26-8	Use as needed for production		6 (calculated as methacrylic acid)	23	
333	Zinc salt of polymers of ethylene and methacrylic acid	28516-43-0	Use as needed for production	5 (Zinc acetate, calculated as zinc: SML)	6 (Calculated as methacrylic acid)	23	
334	Polymers of ethylene and	26061-90-5	Use as needed for	0.02 (glycidyl	6 (calculated as	23	Glycidyl methacrylate readily

	glycidyl methacrylate		production	methacrylate: SML)	methacrylic acid)		reacts with water-based food simulants; its compliance can be verified by screening migration through residue levels.
335	Modified polymers of ethylene and maleic anhydride	9006-26-2	Use as needed for production		30 (calculated as maleic acid)	3	
336	Graft polymers of ethylene and maleic anhydride	106343-08-2	Use as needed for production		30 (calculated as maleic acid)	3	
337	Polymers of ethylene with maleic anhydride and 1-hexene	86286-09-1	Use as needed for production	3 (1-hexene: SML)	30 (calculated as maleic acid)	3	
338	Polymers of ethylene with vinyl acetate and methacrylic acid	26375-31-5	Use as needed for production	12 (vinyl acetate: SML)	6 (calculated as methacrylic acid)	23	
339	Polymers of ethylene with vinyl acetate and maleic anhydride	28064-24-6	Use as needed for production	12 (vinyl acetate: SML)	30 (calculated as maleic anhydride)	3	
340	Polymers of ethylene with vinyl acetate and carbon monoxide	26337-35-9	Use as needed for production	12 (vinyl acetate: SML)			
341	Ethoxylated C_{16}~C_{18} alcohols	68439-49-6	Use as needed for production	0.05 (ethoxylated C_{16}~C_{18} alcohols: SML)			
342	Ethoxylated castor oil	61791-12-6	Use as needed for production	42 (Ethoxylated castor oil: SML)			
343	Silica coating made from hexamethyldisiloxane and hexamethyldisilazane .	—	Use as needed for production	0.05 (hexamethyldisiloxane: SML)			Only for PET coatings at room temperature filling and long-term storage at room temperature (including hot filling and pasteurization under conditions of T≤70℃, t≤2 h or T≤100℃, t≤15 min).

							Not for irradiation; not for use in the production of food contact materials and products specially for infants and young children.
344	Stearic acid; Octadecyl acid	57-11-4	Use as needed for production				
345	Oleic acid; cis-9-octadecenoic acid; (Z)-9-octadecenoic acid	112-80-1	Use as needed for production				
346	Polymers of naphtha with steam cracked light aromatics and naphtha rich in 1,3-pentadiene from steam cracked light aromatics and naphtha with steam cracked medium aromatics.	68527-25-3	60 (based on dry weight of coating)				
Note 1: 0.2 mg/kg [calculated as the sum of 4,4'-methylenebis (2,6-dimethylphenol), the polymer of 4,4'-methylenebis (2,6-dimethylphenol) and epichlorohydrin (TMBPFDGE), TMBPF-DGE·H_2O and TMBPF-DGE·$2H_2O$: SML]; 0.05 mg/kg (calculated as the sum of TMBPF-DGE·HCl, TMBPF·DGE·2HCl and TMBPF-DGE·HCl·H_2O: SML).							
Note 2: 9 mg/6 dm^2 (calculated as the sum of BADGE, BADGE·H_2O, and BADGE·$2H_2O$: QM) or 9 (calculated as the sum of BADGE, BADGE·H_2O, and BADGE·$2H_2O$: SML); 1 mg/6 dm^2 (calculated as the sum of BADGE·HCl, BADGE·2HCl, and BADGE·H_2O·HCl: QM) or 1 (calculated as the sum of BADGE·HCl, BADGE·2HCl, and BADGE·H_2O·HCl: SML).							

National Food Safety Standard

Silicon Rubber Materials and Products for Use in Contact with Foods

Foreword

This standard replaces relevant requirements for silicon rubber materials and products in GB 4806.11-2016 “National Food Safety Standard for Rubber Materials and Products for Use in Contact with Foods.”

As compared with the above-mentioned standard, the following major changes are made to this standard.

— The scope is revised,

— The terms and definitions are revised,

— The requirements for ingredients are modified,

— The sensory requirements are revised,

— The physical and chemical indicators are revised, and volatile substances are added,

— Other technical requirements are added,

— The requirements for migration tests are revised,

— The requirements for labels and marks are revised,

— Appendix A is revised,

— Determination of volatile substances in Appendix B is added.

1. Scope

This standard applies to silicon rubber materials and products for use in contact with foods.

2. Terms and Definitions

2.1 Food contact silicon rubber materials and products

Materials and articles made primarily from organosilicon elastomers, which are produced through crosslinking and curing reactions of polysiloxane polymers with substances such as hydrophobic silica, that are, under intended conditions of use, in contact or may come into contact with foods or food additives, or from which components may migrate into foods.

3. Basic Requirements

Food contact silicon rubber materials and products should comply with provisions in GB 4806.1.

4. Technical Requirements

4.1 Ingredients requirements

4.1.1 The use of basic ingredients for food contact silicon rubber materials and products should comply with Appendix A and provisions in relevant public announcements.

4.1.2 The use of additives in food contact silicon rubber materials and products should comply with GB 9685 and provisions in relevant public announcements.

4.2 Sensory requirements

Sensory requirements for food contact silicon rubber materials and products should meet requirements in Table 1.

Table 1: Sensory Requirements

Items	Requirements
Sensory conditions	Regular color, no abnormal smell, and no impurities.
Soaking liquids	The soaking liquids obtained from migration tests should not have any deterioration in sensory properties such as coloration, turbidity, precipitation, or odor.

4.3 Physical and chemical indicators

4.3.1 General physical and chemical indicators

The general physical and chemical indicators of food contact silicon rubber materials and products should comply with provisions in Table 2.

Table 2: General Physical and Chemical Indicators

Items	Indicators	Testing Methods
Total migration volume [a]/ (mg/dm^2) ≤	10	GB 31604.8
Potassium permanganate consumption volume/(mg/kg) Water (60℃, 2 h) ≤	10	GB 31604.2
Heavy metal (based on Pb)/(mg/kg) 4% acetic acid (volume fraction) (60℃, 2 h) ≤	1	GB 31604.9
Volatile substances / (g/100g) ≤	0.5	Appendix B
[a] Food contacting silicon rubber materials and products especially for infants and young children should have the results converted to mg/kg according to area and volume ratio in actual use, and its limit is no more than 60 mg/kg.		

4.3.2 Other physical and chemical indicators

4.3.2.1 Food contact silicon rubber materials and products should comply with the provisions in Appendix A and regulations about physical and chemical indicators such as specific migration limit (SML), total specific migration limit [SML(T)], and maximum residual mass (QM) in relevant public announcements.

4.3.2.2 Food contact silicon rubber materials and products should comply with provisions in GB 9685 and relevant regulations on physical and chemical indicators of additives used such as SML, SML(T), and QM in relevant public announcements.

4.4 Other technical requirements

Food contact silicon rubber materials and products that use materials such as paint, ink, and (or) adhesive agents should also comply with specifications in relevant national food safety standards for paint, ink, and (or) adhesive agents.

5. Others

5.1 Migration tests

5.1.1 General requirements

Unless otherwise specified in this standard, migration tests should be conducted according to GB 31604.1 and GB 5009.156.

5.1.2 Special requirements

Conditions for the tests of total migration on the silicon rubber materials and products with an intended contact temperature (T) no more than 40℃ and contact time (t) no more than 24 hours should comply with Table 3.

Table 3: Conditions for a Total Migration Test

Expected Conditions for Use	Conditions for Migration Tests
$T \leq 40$℃, $t \leq 10$ min	40℃, 10 min
$T \leq 40$℃, 10 min < $t \leq 30$ min	40℃, 30 min
$T \leq 40$℃, 30 min < $t \leq 2$ h	40℃, 2 h
$T \leq 40$℃, 2 h < $t \leq 24$ h	40℃, 24 h

5.2 Labels

Labels should comply with provisions in GB 4806.1.

Appendix A

Allowable Basic Materials to be Used for Silicon Rubber Materials and Products for Use in Contact with Foods and their Usage Requirements

A.1 Table A.1 stipulates the allowable basic materials to be used for food contact silicon rubber materials and products and the usage requirements. The basic materials listed in A.1 are subject to CAS numbers and Chinese name prevails if the material doesn't have a CAS number.

A.2 Substances with a relative molecular mass greater than 1000 Da formed by polymerization or other methods from basic raw materials such as monomers, other starting materials, and base polymers listed in Table A.1 are also permitted to be used as basic raw materials for food contact silicone rubber materials and products, provided that they comply with the restrictive requirements of the corresponding monomers, other starting materials, and base polymers.

A.3 If the monomers or other starting materials in Table A.1 used to synthesize polymers are the substances in the categories of acid, alcohol, or phenol, then their sodium salts, kali salts, and calcium salts (including acidic and double salts) can also be used in synthesizing polymers, and should comply with the restrictive requirements for relevant monomers and other starting materials in the categories of acid, alcohol, and phenol. The sodium salts, kali salts, and calcium salts (including acidic and double salts) of monomers and other starting materials listed in Table A.1 should be used according to this standard.

Table A.1: Allowable Basic Materials to be Used for Silicon Rubber Materials and Products and Usage Requirements

SN	Chinese name	CAS No.	Maximum amount/%	SML/QM (mg/kg)	Other requirements
1	[(Vinyldimethylsilyl) oxy and modified (trimethylsilyl)] oxy] silanes	68988-89-6	Use as needed for production		
2	Condensations of phenyltriethoxysilane with (siloxanes and polysiloxanes)	72480-33-2	Use as needed for production		
3	Monovinyl-terminated dimethylmethylvinyl (siloxanes and polysiloxanes)	68951-99-5	Use as needed for production		
4	Reaction products of dimethyl (siloxanes and polysiloxanes) and silica dioxide	67762-90-7	Use as needed for production		
5	Polymers of dimethylsiloxane with polysiloxane and ethoxy terminated ethylsilsesquioxane	68554-66-5	Use as needed for production		
6	Dimethylmethyl hydrogenation (siloxanes and polysiloxanes)	68037-59-2	Use as needed for production		
7	Methylsilsesquioxane	68554-70-1	Use as needed		The residual

			for production		amount of methyltrimethoxysilane in this substance is less than 1 mg/kg.
8	Methylhydrosiloxane and polysiloxane	63148-57-2	Use as needed for production		
9	Methylvinyldimethyl (siloxane and polysiloxane)	67762-94-1	Use as needed for production		
10	Polymers of methyl vinyl dimethyl (siloxane and polysiloxane) and methyl phenyl silsesquioxane	68037-69-4	Use as needed for production		
11	Polydimethylsiloxane	63148-62-9; 9016-00-6	Use as needed for production		Molecular weight is not less than 6,800 Da.
12	Copolymer of polydimethylsiloxane and phenylsilsesquioxane	73138-88-2	Use as needed for production		
13	Hydroxyl-terminated dimethylmethyl vinyl (siloxanes and polysiloxanes)	67923-19-7	Use as needed for production		
14	Hydroxyl-terminated polydimethylsiloxane, hydroxyl-terminated dimethyl (siloxane and polysiloxane)	70131-67-8	Use as needed for production		
15	Hydrogen-terminated dimethyl (siloxanes and polysiloxanes)	70900-21-9	Use as needed for production		
16	Vinyl-terminated dimethyl (silicone and polysiloxane)	68083-19-2	Use as needed for production		
17	Vinyl-terminated dimethylmethyl vinyl (siloxane and polysiloxane)	68083-18-1	Use as needed for production		
18	Hydrolysis products of tetraethyl orthosilicate, 1,3-divinyl-1,1,3,3-tetramethyldisiloxane, and hexamethyldisiloxane	104199-38-4	Use as needed for production		
19	Polymers of tetraethyl orthosilicate and hexamethyldisiloxane	104133-09-7	Use as needed for production		
20	Silica	7631-86-9; 112945-52-5; 14808-60-7	Use as needed for production		
21	1-Ethynylcyclohexanol	78-27-3	Use as needed for production		

Appendix B

Determination of volatile substances

B.1 Scope

This standard stipulates the methods for determining the volatile substances in food contact silicon rubber materials and products.

This standard applies to the determination of volatile substances in food contact silicon rubber materials and products.

B.2 Principles

After pretreatment, the mass loss of the food contact silicone rubber materials and products samples was measured after heating and baking at a certain temperature and time under common pressure, so as to obtain the amount of volatile substances in the food contact silicone rubber materials and products under the corresponding conditions.

B.3 Reagent and Materials

B.3.1 Reagent

Water: grade III water in compliance with GB/T 6682.

B.3.2 Materials

B.3.2.1 Container: watch dishes, evaporating dishes, weighing dishes, crucibles, etc.

B.3.2.2 Weighing dish: aluminum, flat.

B.3.2.3 Dryer: contains desiccant.

B.4 Instrument and Equipment

B.4.1 Electronic scales: with a sensitivity of 0.1 mg.

B.4.2 Electric blast drying oven: accurate to 100 ℃ ±2℃, accurate to 200℃ ±3℃。

B.5 Analytic Steps

B.5.1 Sample pre-treatment

Immerse the nipple-type samples in the gently boiling water for 10 minutes, stirring occasionally during the process to ensure the samples are not in contact with the container walls. Remove the samples after immersion, shake off the excess water, and if the samples cannot be immediately

used for the next tests, store them in a desiccator. Other samples don't require pretreatment.

B.5.2 Sample preparation

Cut the samples into fragments with length, width, and thickness not exceeding 2 cm, place them in suitable containers, and ensure that the sample fragments do not overlap. Place the container containing the sample fragments in an electric heating drying oven at (100±2) ℃ and dry for (60±5) minutes. After drying, remove the container and place it in a desiccator to cool for (60±5) minutes before use for tests.

B.5.3 Testing

Place the weighing dish in an electric heating oven at (200±3) ℃ and dry for at least 60 minutes. After removing it, place it in a desiccator to cool for at least 60 minutes, then weigh the empty dish (accurate to 0.1 mg). Repeat the above drying steps until the difference in the mass of the empty dish between two consecutive weighing does not exceed 2.0 mg, then record the mass of the empty dish as m_0. Take about 10 g of the sample fragments to be tested in B.5.2 and place them into a constant-weighing dish, ensuring that the sample fragments do not overlap. Weigh the total mass of the sample fragments and the weighing dish as m_1 (accurate to 0.1 mg). Place the weighing dish containing the sample fragments in an electric heating oven at (200±3) ℃ and dry for (240±5) minutes. After removing it, place it in a desiccator to cool for (120±5) minutes. Weigh the total mass of the sample fragments and the weighing dish as m_2 (accurate to 0.1 mg).

B.6 Description of Analytic Results

The content of volatile substances in the sample is calculated according to the formula (B.1):

$$X = \frac{m_1 - m_2}{m_1 - m_0} \times 100 \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \quad (B.1)$$

Where:

X - volatile substances content in the sample, expressed in grams per 100 grams (g/100 g),
m_1 - total mass of sample and weighing dish before being dried, expressed in gram (g),
m_2 - total mass (g) of sample and weighing dish after being dried, expressed in gram (g),
m_0 - weight of the empty weighing dish, expressed in gram (g),

The calculation result is expressed as the arithmetic means of the two independently determined results obtained under repetitive conditions, accurate to two decimals.

B.7 Precision

When the amount of volatile substances in the sample is ≤ 0.2g/100g, the difference between two independent determination results obtained under repeatability conditions shall not exceed 30% of their arithmetic mean; when 0.2g/100g < the amount of volatile substances in the sample is ≤ 0.5g/100g, the difference between two independent determinations obtained under repeatability conditions shall not exceed 20% of their arithmetic mean; when the amount of volatile substances in the sample is >0.5g/100g, the difference between two independent determinations obtained under repeatability conditions shall not exceed 15% of their arithmetic mean.

END UNOFFICIAL TRANSLATION

Attachments:

GB 4806.10-2025 Coatings and Coating Layers for Food Contact Materials and Articles.pdf

GB 4806.16-2025 Silicone Rubber Materials and Articles for Food Contact.pdf