

Translated English of Chinese Standard: GB4806.11-2016

www.ChineseStandard.net

Sales@ChineseStandard.net

GB

NATIONAL STANDARD

OF THE PEOPLE'S REPUBLIC OF CHINA

GB 4806.11-2016

National food safety standard

Food contact rubber materials and products

食品安全国家标准

食品接触用橡胶材料及制品

How to BUY & immediately GET a full-copy of this standard?

1. www.ChineseStandard.net;
2. Search --> Add to Cart --> Checkout (3-steps);
3. No action is required - Full-copy of this standard will be automatically & immediately delivered to your EMAIL address in 0~25 minutes.
4. Support: Sales@ChineseStandard.net. Wayne, Sales manager

Issued on: October 19, 2016

Implemented on: April 19, 2017

Issued by: National Health and Family Planning Commission of the PRC

Table of contents

Foreword.....	3
1 Scope	4
2 Terms and definitions	4
3 Basic requirements.....	4
4 Technical requirements	4
5 Others	5
Appendix A Raw material requirements for food contact rubber materials and products	7

Foreword

This standard replaces GB 4806.1-1994 “Hygienic standard for foodstuff rubber products” and the relevant information on rubber polymers in the “Notice on the publication of 107 kinds of resins that can be used for food packaging materials such as polyhexamethylene adipamide” (No. 23 Announcement in 2011 by the former Ministry of Health).

As compared with the above standard and announcement, the main changes of this standard are as follows:

- CHANGE the standard name into “National food safety standard - Food contact rubber materials and products”;
- MODIFY the scope;
- ADD the basic requirements;
- ADD the raw material requirements;
- MODIFY the physical and chemical indicators;
- ADD the migration test requirements;
- ADD the label identification requirements;
- ADD the Appendix A.

National food safety standard

Food contact rubber materials and products

1 Scope

This standard applies to the food contact materials and products made of natural rubber, synthetic rubber (including vulcanized thermoplastic elastomer) and silicone rubber as the main raw materials.

2 Terms and definitions

2.1 Natural rubber

It refers to the cis-1, 4-polybutadiene obtained from the plant source Brazilian rubber tree.

2.2 Silicone rubber

It refers to the organic silicone elastomer formed through vulcanization of the polysiloxane-based polymer and hydrophobic silica and other substances under heating and pressure.

3 Basic requirements

Food contact rubber materials and products shall comply with the provisions of GB 4806.1.

4 Technical requirements

4.1 Raw material requirements

The use of the natural rubber, synthetic rubber and silicone rubber raw materials in the food contact rubber materials and products shall comply with the provisions of Appendix A and the relevant announcements, AND the use of the vulcanized thermoplastic elastomer resin shall comply with the Appendix A of GB 4806.6-2016 and the relevant announcements.

4.2 Sensory requirements

Appendix A

Raw material requirements for food contact rubber materials and products

A.1 The base polymer for synthetic rubber shall comply with the provisions of Table A.1.

A.2 The base polymer for silicone rubber shall comply with the provisions of Table A.1.

A.3 The specific migration total limit [SML (T)] and SML (T) group number in the Appendix B of GB 9685-2016 are applicable to this standard.

Table A.1 -- Base polymer for synthetic rubber and requirements for use

No.	Chinese name	CAS number	Generic class name	SML/QM mg/kg	SML (T) mg/kg	SML (T) group number	Other requirements
1	Polymer of 1, 1, 2, 3, 3, 3-hexafluoro-1-propylene and vinylidene fluoride	9011-17-0		ND (1, 1, 2, 3, 3, 3-hexafluoro-1-propylene: SML, DL = 0.01 mg / kg); 5 (1, 1-difluoroethylene: SML)			Relative molecular mass > 70000
2	Copolymer of 1, 1, 2, 3, 3, 3-hexafluoro-1-propene and 1, 1-vinylidene fluoride and tetrafluoroethylene	25190-89-0		5 (1, 1-difluoroethylene: SML); 0.05 (tetrafluoroethylene: SML); ND (1, 1, 2, 3, 3, 3-hexafluoro-1-propene: SML, DL = 0.01mg/kg)			Relative molecular mass > 100000
3	Polymer of 2-methyl-1, 3-butadiene and 2-methyl-1-propene chloride	68081-82-3	CIIR	ND (2-methyl-1, 3-butadiene: SML, DL = 0.01 mg/kg); 1 (2-methyl-1, 3-butadiene: QM)			
4	Polymer of 2-methyl-1, 3-butadiene and bromo-2-methyl-1-propene	68441-14-5	BIIR	ND (2-methyl-1, 3-butadiene: SML, DL = 0.01 mg/kg); 1 (2-methyl-1, 3-butadiene: QM)			
5	Polymer of 3 α , 4, 7, 7 α -tetrahydro-4,	25034-71-3	EPDM				

16	Polyethylene glycol	25322-68-3			30 (in ethylene glycol)	2	
17	Polyisoprene (poly-2-methyl-1, 3-butadiene)	-		ND (2-methyl-1, 3-butadiene: SML, DL = 0.01 mg/kg); 1 (2-methyl-1, 3-butadiene: QM)			
18	Copolymer of chlorobenzene and vinylidene fluoride	9010-75-7		5 (difluoroethylene: SML); ND (chlorotrifluoroethylene: SML, DL = 0.01 mg/kg)			When there is no corresponding chlorobenzene migration quantity detection method, it may use the 0.5 mg/6 dm ² (QM) as the limit value.
19	Polymer of Tall oil rosin and fumarized diacylated rosin with formaldehyde	-			15 (in formaldehyde)	15	
20	Copolymer of ethylene, propylene and ethylene norbornene; Polymer of 5-ethylidenebis [2.2.1] hept-2-ene and ethylene and propylene	25038-36-2	EPDM	0.05 (5-ethylidene-2-norbornene: SML)			When there is no 5-ethylidene-2-norbornene migration quantity detection method, it may use the 0.05 mg/6 dm ² (QM) as the limit value. The ratio between the area of the materials and products containing 5-ethylidene-2-norbornene in contact with food AND the food mass shall be not greater than 2 dm ² /kg.
21	Copolymer of thylene, propylene, ethylene norbornene and dicyclopentadiene	27026-53-5	EPDM	0.05 (5-ethylidene-2-norbornene: SML)			When there is no 5-ethylidene-2-norbornene migration quantity detection method, it may use the 0.05 mg/6 dm ² (QM) as the limit value. The ratio between the area of the materials and products containing 5-ethylidene-2-norbornene in contact with food AND the food

	(siloxane and polysiloxane)						
7	Methyl silsesquioxane	68554-70-1		1 (methyltrimethoxysilane, QM)			

Table A.2 (continued)

No.	Chinese name	CAS number	Generic class name	SML/QM mg/kg	SML (T) mg/kg	SML (T) group number	Other requirements
8	Methyl hydrosiloxane and polysiloxane	63148-57-2					
9	Methylvinyl dimethyl (siloxane and polysiloxane)	67762-94-1					
10	Polymer of methylvinyl dimethyl (siloxane and polysiloxane) and methylphenyl silsesquioxane	68037-69-4					
11	Polydimethylsiloxane	63148-62-9; 9016-00-6					Relative molecular mass > 6800
12	Copolymer of polydimethylsiloxane and phenyl silsesquioxane	73138-88-2					
13	Hydroxyl-terminated dimethylmethylvinyl (siloxane and polysiloxane)	67923-19-7					
14	Hydroxyl-terminated polydimethylsiloxane; hydroxyl-terminated dimethyl (siloxane and polysiloxane)	70131-67-8					
15	Hydrogen-terminated dimethyl (siloxane and polysiloxane)	70900-21-9					
16	Vinyl-terminated dimethyl (siloxane and polysiloxane)	68083-19-2					
17	Vinyl-terminated dimethylmethylvinyl (siloxane and polysiloxane)	68083-18-1					
18	Hydrolysate of tetraethyl orthosilicate, 1,3-divinyl 1, 1, 3, 3-tetramethyldisiloxane, and	104199-38-4					