

Product specific requirements: 105. Food contact article (silicone)

Version: 3.0
Last update: 07.04.2022

Material	Products	Remark
Silicone, Rubber	cutlery for food preparation; plate sets ect., backing/ice forms	Not applicable for baby articles, soothers and accessories



No	Parameter	Method	Reference	Requirement
General requirements				
1	Workmanship	In House	-	Product and its components has to meet the requirements on design and quality according to information offered by producer; No damages on material: - Without major defects - Without pits or burrs and weld smoothly filed / grounded - With finished edges and seams - Even in color
2	Odour	In House	-	No particular smell on material
3	Labelling for products with food contact	In House	SR 817.023.21/ EU (EC) No. 1935/2004	Products which have complied with food grade safety, but have not yet come into contact with food when sold, shall be properly labelled: A word "for foods" (for food contact), or a specific indication of their use or the "glass and fork" symbol Required information shall be provided. Exception: not required if the product is obviously intended for food Place: Directly on the product or packaging or label or on a leaflet.
4	Labelling	In House	SR 817.023.21/ 2001/95/EC	The name or trade name and the address or registered office of the party that is responsible for placing the materials or articles on the market. Place: Directly on the product, or if technically not possible - on a label / leaflet.
5	Labelling	In House	SR 817.023.21/ 2001/95/EC	a) Product identification information b) General safety c) Warning and safety instructions. d) Operating or care instructions e) Special instructions and precautions on how to use the final product if necessary - in a clearly visible place; - in easily readable and indelible writing; - in at least one official language (GE/IT/FR). Place: Directly on the product or packaging or label or on a leaflet.
6	Instruction manual	In House	SR 817.023.21/ 2001/95/EC	The presentation of the product, the labelling, any warnings and instructions for its use and disposal and any other indication or information regarding the product. The contents shall be clear, easy to understand and sufficient, regarding the intended usage, assembly, safe operation, maintenance, necessary warnings and other useful instructions, if applicable.
7	Instruction manual	In House	SR 817.023.41	Recommendation for temperature range for silicon articles
8	Instruction manual	In House	SR 817.023.21/ 2001/95/EC	Special instructions and precautions on how to use the final product if necessary. Recommendations: • No direct contact with the heat source, such as gas flame, oven heating element or electric hotplates. • Do not damage the product with sharp objects or scouring sponges. • Throw away the item if it wears, the color fades or the non-stick effect is.



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Chemical requirements																															
Rubber (for Food Contact Part)																															
9	Overall migration	EN 1186	SR 817.023.21 BfR XXI(Germany)	≤ 10 mg/dm2/ 60 mg/kg (migration of div. Classes I, II, III in accordance with BfR XXI)																											
10	Colour release	24th Commun. on the testing of plastics, BGBL 15 (1972) 285	SR 817.023.21 BfR XXI(Germany)	Coloured plastics, silicone, rubber with food contact: no color release																											
11	Primary aromatic amines	DIN 13130, UV/Vis	SR 817.023.21 EU ResAP (2004)4	Swiss: n.d. (each 0,01 mg/kg) BfR XXI (Germany): Max. 20 µg/L																											
12	Formaldehyde	DIN 13130, UV/Vis	Not regulated in CH BfR XXI(Germany)	3 µg/ml																											
13	Polycyclic aromatic hydrocarbons (PAH) (Annex 1)	AfPS GS 2019:01 PAK	Not regulated in CH BfR XXI (Germany)	8 PAH: n.d.< 0.2 mg/kg (each)																											
14	Lead impurities (Pb)	DIN EN ISO 11885, ICP-OES	Not regulated in CH BfR XXI (Germany)	n.d. (0.003%)																											
15	Zinc impurities	DIN EN ISO 11885, ICP-OES	Not regulated in CH BfR XXI (Germany)	< 3.0 %																											
16	Nitrosamine	BfR XXI Part BII 2.5.2.2.5.2	Not regulated in CH BfR XXI (Germany); Manor requirements with reference to SR 817.023.41 Art. 14a	EU: 1 µg/cm2 Manor: 0.01 mg/kg																											
17	N-Nitrosatables release	BfR XXI Part BII 2.5.2.2.5.2	Not regulated in CH BfR XXI (Germany); Manor requirements with reference to SR 817.023.41 Art. 14a	Manor: 0.1 mg/kg																											
Silicon (for Food Contact Part) (specific requirements for Switzerland: silicone products with food contact may only be produced from materials listed in Annex 2: https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/anhang2-verordnung-materialien-kontakt-lm-gg.pdf.download.pdf/Anhang_2.pdf And in Annex 9: https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/anhang9-verordnung-materialien-kontakt-lm-gg.pdf.download.pdf/Anhang_9.pdf																															
18	Volatile organic components (VOM)	In House	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: (at 200 ° C for 4 hours) ≤ 0.5% (w/w)																											
19	Overall migration	EN 1186	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: ≤ 10 mg/dm2 / 60 mg/kg;																											
20	Primary aromatic amines	EN 13130	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: n.d. (sum 0,01 mg/kg) (Food simulant)																											
21	Specific Metall Release	Acid digestion / AAS or ICP	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory <table><tr><th>No</th><th>Element (food)</th><th>SRL (mg/kg)</th></tr><tr><td>1</td><td>Aluminium</td><td>1</td></tr><tr><td>2</td><td>Barium</td><td>1</td></tr><tr><td>3</td><td>Cobalt</td><td>0.05</td></tr><tr><td>4</td><td>Copper</td><td>5</td></tr><tr><td>5</td><td>Iron</td><td>48</td></tr><tr><td>6</td><td>Lithium</td><td>0.6</td></tr><tr><td>7</td><td>Manganese</td><td>0.6</td></tr><tr><td>8</td><td>Zinc</td><td>5</td></tr></table>	No	Element (food)	SRL (mg/kg)	1	Aluminium	1	2	Barium	1	3	Cobalt	0.05	4	Copper	5	5	Iron	48	6	Lithium	0.6	7	Manganese	0.6	8	Zinc	5
No	Element (food)	SRL (mg/kg)																													
1	Aluminium	1																													
2	Barium	1																													
3	Cobalt	0.05																													
4	Copper	5																													
5	Iron	48																													
6	Lithium	0.6																													
7	Manganese	0.6																													
8	Zinc	5																													
22	Specific migration of formaldehyde	DIN 13130, UV/Vis	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: SRL ≤ 15 mg/kg food simulant																											
23	Polycyclic aromatic hydrocarbons (PAH) (only if coloured)	AfPS GS 2019:01 PAK	Not regulated in CH § 30 LFGB	8 PAH: n.d.< 0.2 mg/kg (each)																											
24	Sensory test	DIN 10955	Not regulated in CH (EU) 1935/2004 ResAP(2004)5	< 3																											
25	Colour release	24th Commun. on the testing of plastics, BGBL 15 (1972) 285	SR 817.023.21 (EU) 1935/2004	Coloured plastics, silicone, rubber with food contact: no color release																											

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No	Parameter	Method	Reference	Requirement
26	Lead (Pb)	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	n.d. (2 mg/kg)
27	Cadmium (Cd)	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	n.d. (0,5 mg/kg)
Paints, varnishes or colourants (if any) <i>(specific requirements for Switzerland listed in SR 817.023.21 Annex 10): https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/anhang10-verordnung-materialien-kontakt-lm-gg.pdf.download.pdf/Anhang_10.pdf</i>				
28	Colourants	In House	SR 817.022.31 (LGV)	May be used to painting of plastic parts that may come into contact with food: a. colourants approved for food pursuant to SR 817.022.31 (LGV); b. barium sulphate; c. barite varnish that does not include barium carbonate and water-soluble barium compounds; c. chromium III oxide; d. copper and its alloys.
29	Lead (Pb), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 Annex 2	n.d. in coating 100 mg/kg
30	Cadmium (Cd), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 Annex 2	n.d. in coating 100 mg/kg
Product specific requirements				
FUNCTIONAL TESTS				
31	Hygiene	Actual Use	-	All surfaces intended to come into contact with food shall be easily cleanable under normal circumstances.
32	Leakage Test (if applicable)	Actual Use	-	On the horizontal table fully filled with water and 05% soap liquid, and maintained for 24hrs. No leakage occurrence.
33	Stain Resistance	Actual Use	-	No permanent staining after applying mustard, spaghetti sauce to different spots. Let stand 2 hours. Wash 1 cycle in hot dishwasher 60°C (Or if not dishwasher safe, soak 30 min. in hot, soapy 0,5% water).
34	Smell in water release	Actual Use	-	Put water 60°C for 24h and leave at room t. Taste the water: extraneous taste with at level 1 allowed
PHYSICAL CHARACTERISTICS				
35	Overall Dimensions (cm & inch) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).
36	Overall Weight (kg & lbs) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).
37	Volume or Capacity (L or lq. oz) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).

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PERFORMANCE TESTING				
38	Dishwashing Test (If Applicable)	EN 12875-1	-	Shall withstand 125 cycles of dishwashing cycles at hot setting 60°C without visible damage or colour changing
39	Hand Wash durability (only if dishwasher is not applicable)	In House	-	Shall exhibit no exterior surface degradation after being hand washed 10 times using a national brand liquid detergent at peak of 40±5°C, followed by rinse in cold water.
40	Performance to labelled claims	Actual use	-	Products are tested under controlled conditions to verify that the product conforms to performance claims made by manufacturer or distributor, contained on the products, packaging, or in the product documentation.
41	Effects Of Heat (if applicable)	In House	-	No visual change or failure after filling up with boiling water 10 Min at 100 °C
42	Heat Resistance Test (if applicable)	In House	SR 817.023.21	For Swiss mandatory: t: 200 °C or claimed max t + 20 °C; Duration: 4 hours. Then cool down to room t. Weight bevor and after. <0,5% Loss of initial weight.
43	Effects Of Cold (if applicable)	In House	-	No visual change or failure after 1 time with filling up with water and 1 time empty sample frozen at -18 °C for 24 hours. Or food has some frost.
44	Cross-Cut Adhesion Test (For Paint and Coating on Solicon) (if applicable)	EN ISO 2409	-	Shall comply with Class 1 according to EN ISO 2409.
45	Resistance to Microwave Heating (if microwave safe)	In House	-	Fill with food 90% of capacity. Lid not fixed to the container, 800W until food (according to use) is completely hot. No distortion/ color change/ melting/ deformation/ charring / staining shall be observable after 3 cycles
46	Extreme Heating in Microwave (if microwave safe)	With reference to EN 15284:2007	-	Keep the product in water at room temperature 20-25 °C for 1 hour. After short period heating (according to Norm), surface temperature shall not exceed 40-45°C. No deformation. No breakage as in Table 1 of EN 15284:2007 occurs.
47	Thermal Shock	With reference to DIN 12546-P.5.5	-	Shall withstand the thermal shock Δt80 for 5 min (by 100°C and than by 10-20°C) . No deformation. No crack on surface is allowed.