


Product specific requirements: 101. Food contact article (plastic)

Version: 3.0  
Last update: 08.04.2022

Material	Products	Remark
Plastics; Melamin	plates, cereal bowls, trays, sieves, non insulated container, flexible cutting pad, place- & table mats	Not applicable for kids <3, baby bottles, one time use item, PET bottles



No	Parameter	Method	Reference	Requirement
<b>General requirements</b>				
1	Odour	In House	-	No particular smell on material
2	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 scratches, dents, cracks, marred or discolored surface - Without major defects - Without components missing, deformed or fractured - Without hardware missing - Without pits or burrs and weld smoothly filed / grounded - Without loose components or loosened fastening where rigidity is required - With proper and uniform adhesion in wooden parts - Without flash and consistent in size, color and form for plastic parts - With finished edges and seams - Even in color & clarity - Evenly aligned in seams and components
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    (if microwave safe)  - 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	Warning for Melamin Products	In House	-	Recommendation: "till maximal 70°C" Or "not for microwave use"  - in a clearly visible place & durable; - in at least one official language (GE/IT/FR) - place: Directly on the product
7	Ease of Assembly	In House	-	Shall provide ease of assembly and shall be accurate with no missing parts.
8	Functionality	In House	-	The sample shall function as intended or as claimed in the state of as-received.
9	Claim Verification	In House	-	Must comply with all claims (including accessories, if any).
<b>Chemical requirements</b>				
<b>Plastics (Non-Food Contact Part)</b>				
10	Lead (Pb), total content	Acid digestion / AAS or ICP	SR 814.81 REACH	Without food contact: 500 mg/kg
11	Cadmium (Cd), total content	Acid digestion / AAS or ICP	SR 814.81	Without food contact: 100 mg/kg
12	Polycyclic aromatic hydrocarbons (PAH)	AfPS GS 2019:01	SR 817.023.21 (EU) 10/2011	Only in EU: 8 PAH: ≤ 1 mg/kg (each)
13	Short Chain Chlorinated Paraffin (SCCP) total content	ISO 18219 / GC-NCI-MS / GC-ECD	Not regulated in CH Regulation (EU) No 2019/1021 and its amendments	≤ 0.15% (Articles)

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<b>Plastics in general (With food contact) (SR 817.023.21 LGV )</b> (specific requirements for Switzerland listed in Annex 2): <a href="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">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</a>  Logbook of changes from former CH Law: <a href="https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/logbook-of-changes.pdf.download.pdf/Logbook_Ink.pdf">https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/logbook-of-changes.pdf.download.pdf/Logbook_Ink.pdf</a>						
14	Lead (Pb), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	n.d. in coating 100 mg/kg in Plastics: n.d. (2 mg/kg)		
15	Cadmium (Cd), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB (Germany)	n.d. in coating 100 mg/kg in Plastics: n.d. (0,5 mg/kg)		
16	Colour release	24th Commun. on the testing of plastics, BGBL 15 (1972) 285	SR 817.02 Recommendation of BfR (Germany)	Coloured plastics, silicone, rubber with food contact: no color release		
17	Polycyclic aromatic hydrocarbons (PAH) (Annex 1) (only if coloured)	AfPS GS 2019:01	SR 817.023.21 (EU) 10/2011	8 PAH: n.d. 0.2 mg/kg (each)		
18	Primary aromatic amines	DIN 13130, UV/Vis	SR 817.023.21 (EU) 10/2011 BfR XXI (Germany)	n.d. (each 0,01 mg/kg) Shall not be detected (Detection Limit = 0.002 mg/kg for substances under Entry 43 of Annex XVII of Regulation EC 1907/2006; 0.01 mg/kg for other PAAs)		
19	Overall Migration	EN 1186	SR 817.023.21 (EU) 10/2011	≤ 10 mg/dm <sup>2</sup> or 60 mg/kg		
20	Specific Migration of heavy metals	EN 13130	SR 817.023.21 (EU) 10/2011	Specific migration shall not exceed the requirements of 19 heavy metals		
21	Sensory test	DIN 10955	EU) 1935/2004	< 3		
<b>Colourants (SR 817.023.21 LGV)</b> (specific requirements for Switzerland listed in Annex 10): <a href="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">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</a>						
22	Colourants	In House	SR 817.023.21	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; d. chromium III oxide; e. copper and its alloys.		
<b>Specific Plastics (with food contact)</b>						
				Material	CAS No/ Mat. No	
23	Specific migration of formaldehyde	DIN 13130, UV/Vis	SR 817.023.21 (EU) 10/2011	requirement of 15 mg/kg	PET Melamin	0000050-00-0 / 1
24	Specific migration of melamin	DIN 13130, UV/Vis	SR 817.023.21 (EU) 10/2011	Max. 2,5 mg/kg food simulant	Melamin	108-78-1
25	Residual vinylchloride	HS-GC-MS	SR 817.023.21 (EU) 10/2011	≤ 1 mg/kg (in Material)	PVC	0025322-99-0
26	Specific migration of bisphenol A	DIN 13130, HPLC-DAD/FLD	SR 817.023.21 (EU) 10/2011/ 2018/213	≤ 0.6 mg/kg food simulant From 2018 ≤0,5 mg/kg food simulant	PC	3253-39-2
27	Specific migration of Acrylonitrile-Butadien-Styrol (ABS)	DIN 13130, HS-GC-MS	SR 817.023.21 (EU) 10/2011	not detectable (< 0.01 mg/kg food simulant)	ABS, SAN	0000107-13-1
28	Specific migration of Polymethylmethacrylate (PMMA)	DIN 13130	SR 817.023.21 (EU) 10/2011	EU Regulation: ≤ 0.6 mg/kg	PMMA	9011-14-7
29	Toluene	GC-MS	SR 817.023.21 EC 1907/2006	≤ 1 mg/kg	PU	0000584-84-9
30	Isocyanates	EN 13130-8	SR 817.023.21 (EU) 10/2011	sum ≤ 1 mg/kg as NCO	PU	0000112-96-9

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No	Parameter	Method	Reference	Requirement												
31	Butadiene, total content	HS-GC-MS	SR 817.023.21 (EU) 10/2011	not detectable ≤ 1 mg/kg	PS	0000078-79-5										
32	Specific migration of hexamethylene diamine	DIN 13130, LC-MS/MS	SR 817.023.21 (EU) 10/2011	≤ 2.4 mg/kg food simulant	PA 6.6	0061269-61-2										
33	Specific migration of caprolactame	DIN 13130, LC-MS/MS	SR 817.023.21 (EU) 10/2011	≤ 15 mg/kg food simulant	PA 6	105-60-2 / 360										
34	Specific migration of acetaldehyde	DIN 13130, HPLC-UV	SR 817.023.21 (EU) 10/2011	≤ 6 mg/kg food simulant	PET	75-07-0 / 57										
35	Specific migration of ethylenglycole and diethylenglycole	DIN 13130, GC-FID	SR 817.023.21 (EU) 10/2011	sum ≤ 30 mg/kg food simulant	PET	107-21-1; 111-46-6 / 413; 541										
36	Specific migration of terephthalic acid and isophthalic acid (IPA)	DIN 13130, IC	SR 817.023.21 (EU) 10/2011	≤ 7.5 mg/kg food simulant (TPA) / ≤ 5 mg/kg food simulant (IPA)	PET	100-21-0 121-91-5 / 280; 289										
37	Specific migration of antimony (Sb)	DIN 13130, ICP-OES	SR 817.023.21 (EU) 10/2011	≤ 0.04 mg/kg food simulant	PET	0001309-64-4										
38	Total content of chromium (Cr), Vanadium (V), Hafnium (Hf), Zirconium (Zr)	DIN EN ISO 11885, ICP-OES	Not regulated in CH Recommendation of BfR XXI	≤ 10 mg/kg (Cr) ≤ 20 mg/kg (V) ≤ 100 mg/kg (Zr) ≤ 100 mg/kg (Hf)	PP	/										
<b>Product specific requirements</b>																
<b>FUNCTIONAL TESTS</b>																
39	Hygiene	In House	-	All surfaces intended to come into contact with food shall be easily cleanable under normal circumstances.												
40	Stain Resistance	In House	-	No permanent staining after applying mustard, spaghetti sauce to different spots. Let stand 2 hours. Wash 1 cycle in hot dishwasher safe, soak 30 min. in hot, soapy water).												
41	Drop Impact Test (If applicable)	In House	-	Sample shall not produce any breakage, cracking or other abnormalities after 10 drops from a height of 80 cm onto a concrete (tile) floor.												
42	Stability Test (Applicable to Free-standing Items)	In House	-	The sample shall not overbalance on a 10-degree slope in all directions. Still stable, wobble a little bit												
43	Leakage Test (If applicable, not for insulated items)	In House	-	On the horizontal table fully filled with water with 0,5% soap liquid, and maintained for 24hrs. No leakage occurrence.												
44	Snap Fit Lid (If Applicable)	In House	-	Lid shall fit securely to the body of the sample. Snap fit lid shall fit onto cup												
45	Tightness for bottles (If Applicable)	In House	-	Lid shall remain attached when cup is filled with for 3/4 in water 60°C and inverted for 30 Min.												
46	Hinges / Locking Mechanism	In House	-	No Failure - 100 times cycling												
47	Stiffness of trays	In House	-	Deflection under load (below) shall no exceed 5%  <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Size of Trays, cm2</th> <th>Load mass for tests, kg</th> </tr> </thead> <tbody> <tr> <td>till 500</td> <td>1,5</td> </tr> <tr> <td>&gt; 800</td> <td>1,8</td> </tr> <tr> <td>&gt;1200</td> <td>2,0</td> </tr> <tr> <td>&gt;1700 and more</td> <td>2,5</td> </tr> </tbody> </table>	Size of Trays, cm2	Load mass for tests, kg	till 500	1,5	> 800	1,8	>1200	2,0	>1700 and more	2,5		
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<b>PHYSICAL CHARACTERISTICS</b>				
48	Overall Dimensions (cm & inch) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).
49	Overall Weight (kg & lbs) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).
50	Volume or Capacity (L or lq. oz) (if claim)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%). Not for calibration!
51	Handle Strength	Actual Use	-	Twice heavier as claimed (or full capacity x 1,5 times) for 5 Min. No breakage or adverse effects.
<b>PERFORMANCE TESTING</b>				
52	Dishwashing durability (if Applicable)	EN 12875-1	-	Except silver-plated, aluminium and cast iron unless claimed to be dishwasher safe: 125 cycles according to the care instruction if any. No breakage or adverse effects, no color change and damage. Load in bottom rack unless claimed top loading only. If failure, must include warning label on package.
53	Hand Wash durability (if dishwasher is not applicable)	In-House Method	-	Shall exhibit no exterior surface degradation, no color change and damage after being hand washed 10 times using a national brand soap 0,5% liquid detergent at peak of 40±5°C, followed by rinse in cold water.
54	Heat Transmission	Actual Use	-	Fill the sample with boiling water for 15 Min and just cool down in room temperature, then measure the surface or handle temperature. Maximum surface temperature: 60°C
55	Resistance to Hot Water	In House Method	-	Fill the sample with water 60±5°C for 15 Min and just cool down in room temperature. No color change, damage or adverse effects. For food products intended to be hot, water temperature 100+/-5°C For other food products water temperature 60 +/- 5°C. The handle temperature shall not exceed 40-45°C
56	Effects of Heat (if applicable, not for oven safe)	In House Method	-	No visual change or failure after filling up with water 10 Min at 100 °C
57	Effects of Cold	In House Method	-	No visual change or failure after filling up with water and frozen at -18 °C for 24 hours Slight deformation/coloration is allowed. Or food has some frost.
58	Resistance to Microwave Heating (if microwave safe)	In House Method	-	Fill with food 90% of capacity. Food: goulash. Lid not fixed to the container, 800W until food is completely hot. No distortion/ color change/ melting/ deformation/ charring / staining shall be observable after 3 cycles.
59	Extreme Heating in Microwave (if microwave safe)	EN 15284:2007	-	Keep the product at room temperature 20-25 °C for 1 hour. After short period heating (according to Norm), empty sample, surface temperature of handles shall not exceed 40-45°C. No deformation. No breakage as in Table 1 of EN 15284:2007 occurs. Slight deformation/coloration is allowed.