

Product specific requirements: 100. Cookware

Version: 3.0
Last update: 12.04.2022

Material	Products
metal	Plots, Pans, Lids, Wok, other similar items



No	Parameter	Method	Reference	Requirement
General requirements				
1	Workmanship	In House	-	Product has to meet the requirements on odor: No 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 major defects -Without components missing, deformed or fractured -Without hardware missing -Without loose components -With proper and uniform adhesion in wooden parts -Consistent in size, color and form for plastic parts -Even in color & clarity
3	Workmanship	EN 12983-1 (for cookware) P.6.1.4	-	The item shall be free from sharp edges, mechanical squeezing and shearing points: Free from burrs, splinters or sharp edge: -Without pits or burrs and weld smoothly filled / grounded -Without scratches, dents, cracks, marred or discolored surface -With finished edges and seams -Evenly aligned in seams and components
4	Handling	EN 12983-1 (for cookware)	-	Construction has to be done according to the latest technical standards and current state of knowledge. 1. Possible to use the knob without contact with hot surfaces 2. Easy to remove the lid
5	Construction	EN 12983-1 clause 6.1.2	-	2 handles if capacity >3,75L or weight >5kg (when filled with water)
6	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.
7	Labelling	In House	SR 817.023.21/ EN 12983-1	a) Product identification information b) General safety c) Warning and safety instructions. d) Operating or care instructions - 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.
8	Instruction manual	In House	SR 817.023.21	clear, easy to understand and sufficient
9	Claim Verification	In House	-	Visual Check

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Chemical requirements																																																																																												
Metals and alloys																																																																																												
10	Lead / Cadmium / Arsen	ICP-MS	SR 817.023.21	< 0,05 % Lead < 0,01% Cadmium < 0,03% Arsen																																																																																								
11	Lead	ICP-MS	SR 814.81	Allowed alloy of brass (messing); Lead total content < 0,5%																																																																																								
12	Tin (mandatory risk analysis)	ICP-MS	SR 817.023.21	Products from Tin (min. 97 % Tin); < 0,05 % Lead < 0,01% Cadmium																																																																																								
13	Tin as Alloy (mandatory risk analysis)	ICP-MS	SR 817.023.21	Sn 99,85 % < 0,01 % Lead < 0,01% Cadmium																																																																																								
14	Specific Metal Release	EN 13130 / ICP and ICP-MS	Not regulated in CH Manor requirements with reference to Resolution CM/Res (2013)9	Highly recommended to follow requirements to 21 Elements according to CM/RES (2013)9 Resolution CM/Res (2013)9 on metals and alloys used in food contact materials and articles: <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>No</th> <th>W</th> <th>Element (food)</th> <th>SRL (mg/kg)</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>Aluminium</td><td>5</td></tr> <tr><td>2</td><td></td><td>Antimony</td><td>0.04</td></tr> <tr><td>3</td><td></td><td>Arsenic</td><td>0.002</td></tr> <tr><td>4</td><td></td><td>Barium</td><td>1.2</td></tr> <tr><td>5</td><td></td><td>Beryllium</td><td>0.01</td></tr> <tr><td>6</td><td></td><td>Cadmium</td><td>0.005</td></tr> <tr><td>7</td><td></td><td>Chromium</td><td>0.250</td></tr> <tr><td>8</td><td></td><td>Cobalt</td><td>0.02</td></tr> <tr><td>9</td><td></td><td>Copper</td><td>4</td></tr> <tr><td>10</td><td></td><td>Iron</td><td>40</td></tr> <tr><td>11</td><td></td><td>Lead</td><td>0.010</td></tr> <tr><td>12</td><td></td><td>Lithium</td><td>0.048</td></tr> <tr><td>13</td><td></td><td>Manganese</td><td>1.8</td></tr> <tr><td>14</td><td></td><td>Mercury</td><td>0.003</td></tr> <tr><td>15</td><td></td><td>Molybdenum</td><td>0.12</td></tr> <tr><td>16</td><td></td><td>Nickel</td><td>0.14</td></tr> <tr><td>17</td><td></td><td>Silver</td><td>0.08</td></tr> <tr><td>18</td><td></td><td>Thallium</td><td>0.0001</td></tr> <tr><td>19</td><td></td><td>Tin</td><td>100</td></tr> <tr><td>20</td><td></td><td>Vanadium</td><td>0.01</td></tr> <tr><td>21</td><td></td><td>Zinc</td><td>5</td></tr> </tbody> </table>	No	W	Element (food)	SRL (mg/kg)	1		Aluminium	5	2		Antimony	0.04	3		Arsenic	0.002	4		Barium	1.2	5		Beryllium	0.01	6		Cadmium	0.005	7		Chromium	0.250	8		Cobalt	0.02	9		Copper	4	10		Iron	40	11		Lead	0.010	12		Lithium	0.048	13		Manganese	1.8	14		Mercury	0.003	15		Molybdenum	0.12	16		Nickel	0.14	17		Silver	0.08	18		Thallium	0.0001	19		Tin	100	20		Vanadium	0.01	21		Zinc	5
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15	Sensory test	DIN 10955	(EU) 1935/2004	< 3																																																																																								
Paints and varnishes																																																																																												
16	Lead (Pb) total content, Cadmium (Cd) total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 Annex 2	n.d. in coating 100 mg/kg																																																																																								
Ceramics and Glass, Enamel (for Lids)																																																																																												
17	Lead, Cadmium	EN 1388 7086-1 7086-1 (24 hours at 22 ° C to 4 % acetic acid)	SR 817.023.21 Mandatory confirmation about the compliance for all products	Lead: < 25 mm: 0.8 mg/dm2 < 25 mm: 4.0 mg/l > 3 L: 1.5 mg/l Cadmium: < 25 mm: 0.07 mg/dm2 < 25 mm: 0.3 mg/l > 3 L: 0.1 mg/l																																																																																								

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
No	Parameter	Method	Reference	Requirement
Plastics (Non-Food Contact for Handles)				
18	Lead (Pb) total content, Cadmium (Cd) total content	Acid digestion / AAS or ICP	SR 814.81	Lead: Without food contact: 500 mg/kg Cadmium: Without food contact: 100 mg/kg
19	Polycyclic aromatic hydrocarbons (PAH)* Annex 1	AfPS GS 2019:01	SR 817.023.21 (EU) 10/2011	Without food contact: Only in EU: 8 PAH: ≤ 1 mg/kg (each)
20	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)
Wood (Non-Food Contact for Handles)				
21	Wood preservatives: 1. Arsenic or arsenic compounds 2. Tar oils	GC-MS	SR 814.81	Treated wood may not be placed on the market: a. creosote (CAS no. 8001-58-9); b. creosote oil (CAS no. 61789-28-4); c. distillates (coal tar), naphthalene oils (CAS no. 84650-04-4); d. creosote oil, acenaphthene fraction (CAS no. 90640-84-9); e. distillates (coal tar), upper (CAS no. 65996-91-0); f. anthracene oil (CAS no. 90640-80-5); g. tar acids, coal, crude (CAS no. 65996-85-2); h. creosote, wood (CAS no. 8021-39-4); i. low-temperature coal (CAS no. 22384-78-5).
22	Arsenic (As) (specially for Bamboo)	DIN EN ISO 11885 ICP-OES	SR 814.81 EG 1907/2006	Ban on use treated wood may not be placed on the market
23	Penta-, Tetrachlorophenol(PCP/TricP/TeCP)	GC-ECD oder GC-MS	Not regulated in CH; EG 1907/2006	≤ 0.5 mg/kg+
PTFE (Teflon) Coating Specific Migration				
24	Formaldehyde	SGS In-house Method	BfR LI Recommendations (Germany) (Mandatory) testing conditions: (2h/100°C)	Limits according to (EU) Nr. 10/2011 <15 mg/kg
25	Chrom	SGS In-house Method		< 0,02 mg/dm ² (in extract)
26	Lithium	SGS In-house Method		Limits according to (EU) Nr. 10/2011 Content on Lithiumoxid < 2,1 % < 0,5 mg/dm ²
27	Phenol substances	SGS In-house Method		< 0,05 mg/dm ²
28	Fluor total	SGS In-house Method		< 0,05 mg/dm ²
29	Organically bound nitrogen	SGS In-house Method		< 0,02 mg/dm ²
30	Emulgatoren (PFOS)	SGS In-house Method		< 0,05 mg/dm ²
31	Color Release	SGS In-house Method		No Color release
32	Overall Migration	EN 1186	Simulance B, fat substitutes, OM5	

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FUNCTIONAL TESTS				
33	Hygiene	EN 12983-1 P.6.1.3	-	All surfaces intended to come into contact with food shall be easily cleanable under normal circumstances.
34	Stability Test	EN 12983-1 P.6.1.3	-	- under 5° inclined surface: Still stable, wobble a little bit
35	Base stability under shock conditions	NF EN 12983-1 (point 9.2, M)	-	After 20 cycles: The base shall not become convex. Concavity remains < 5% deformation
PHYSICAL CHARACTERISTICS				
36	Volume or Capacity (L or lq. oz)	EN 12983-1 clause 6.2.2	-	Points of measurement of any claimed dimensions, shall be made clear - Real capacity > claimed capacity; >5-10% claimed volume
37	Overall Dimensions (cm & inch) (if claimed)	EN 12983-1 clause 6.2.3	-	- Base diameter + 20/+25mm or -5/ -10mm - All other diameter +/-5mm
38	Overall Weight (kg & lbs) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).
39	Base Thickness (mm) (if claimed)	EN 12983-1 clause 6.2.4	-	- Base thickness > 85% of claimed thickness
40	Handle Strength	Actual Use	-	For items with 1 handle: twice heavier as claimed for 5 Min: For items with 2 handles: heavy as claimed for 15 Min a handle
PERFORMANCE TESTING				
41	Thermal hazards	NF EN 12983-1 (point 7.7, F)	-	The maximum temperature shall not exceed specified values depending on the type of material. a) metal 55 °C b) plastics 70 °C c) wood 89 °C d) ceramic, glass, stone 66 °C
42	Heat storage	In-House Method	-	Cooling down time of oil from 200°C until 120°C min. 5-7 Min
43	Heating up Time	In-House Method	-	Heating up time <3min
44	Temperature distribution		-	Milk test by 200°C: deviation btw hottest and lowest point= <5% Or powdered sugar test: equal distribution of heat over 70% surface
45	Wash durability	EN 12875-1 (for cookware)	-	For cookware: Hand wash and dishwasher test: Hand wash After cleaning the pan in hot, soapy water 10 times. Dishwasher test After 50 cycles of washing in dishwasher Results: No rust, color change and corrosion

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ADDITIONAL REQUIREMENTS TO HANDLES				
46	Resistance to burning	NF EN 12983-1 (point 7.2, A)	-	Any burning shall self-extinguish within 15 s -A handle shall not melt or drip molten and/or burning material
47	Heat resistance (for plastic)	NF EN 12983-1 (point 7.3, B)	-	No alteration of the equipment attached to the main body after 1h at 150°C; - Minor changes of plastic, little crack; slight discoloration- allowed
48	Torque resistance	EN 12983-1 (point 7.4, C)	-	The movement of the handle shall be no more than 10° in either direction.
49	Bending strength	NF EN 12983-1 (point 7.5, D)	-	A handle fixing system shall withstand a bending force of 100N without failure of the securing system: -slight deformation. The handles are a little bit loose. No collapse in fixing system
50	Fatigue resistance	NF EN 12983-1 (Point 7.6, E)	-	A handle shall withstand 15 000 cycles: -distortion max. 5% ; fixing system becomes loose; safety and function are not affected.
ADDITIONAL REQUIREMENTS TO HANDLES				
51	Heat resistance	CEN/TS 12983-2: 2005	-	Put the glass lid in the oven of 120°C for 30 minutes and immerse it into the water of 20°C directly after taking out from the oven: -obvious damages, no function lost
52	Sealing of the lid	Actual use	-	No leakage of splashing water by boiling water
ADDITIONAL REQUIREMENTS TO NONSTICK COATING				
51	Abrasion resistance	British Standard 7069:1988, A.1	-	>1000-1750 cycles: no peeling, no exposure of base metal, no trace of food
52	Cross-cut adhesion	EN 12983-1 (8.4.1)	-	Min. Class 1
53	Compatibility with induction hotplate	Actual use	-	Items shall be properly detected on references induction hotplates
54	Performances on induction hotplate or other electrical hotplates	Actual use	-	No alteration shall be observed on the internal or external coating, either on the hotplate surface. The concavity shall remain >0 but lower than 1% of the base diameter. The heat distribution shall be homogeneous
55	Non-stick properties (with carbonized milk)	NF D 21 511 (point 3.3.1)	-	PTFE coating: cotation 2
56	Adherence of the coating	NF D 21 511 (point 3.4)	-	No part is detached when new, after the test with water and after the test with oil.
57	Corrosion	British Standard 7069:1988 or NF D21511 (point 3.5)	-	Non-stick coating shall be: No trace of corrosion on the surface. A few local visual alterations of the coating without oxidation is allowed: Minor change & discoloration - possible
58	Corrosion	ISO 9227	-	After 24 hours in 5% salt spray (fog) after 6 h staying empty, there shall be no major discoloration in appearance or any major corrosion that would affect the overall product performance.