

Product specific requirements: 106. Insulated Container

Version: 3.0
Last update: 07.04.2022

Material	Products	Remark
Metall, Plastic, Glass	Vacuum Ware, Insulated Flasks, Mugs, Jugs, Insulated Container, Thermos	-



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 scratches, dents, cracks, marred or discolored surface - Without components missing, deformed or fractured - Without hardware missing or loose components or loosened fastening where rigidity is required - With finished edges and seams - Evenly aligned in seams and components
2	Odour	In House	-	No particular smell on material
3	Design	In House	-	Free from sharp edges, mechanical squeezing and shearing points. Free from burrs, splinters or sharp edge: - Without pits or burrs and weld smoothly filed / grounded - Without scratches, dents, cracks, marred or discolored surface - With finished edges and seams - Evenly aligned in seams and components
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 • Net quantity of the contents in terms of weight, measure or numerical count (Metric & EU Standard) or a combination 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	Give accurate information and facilitate value comparison by the consumer • Product identification • General safety • Warnings on the inherent dangers (if necessary) • 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.
6	Instruction manual	In House	SR 817.023.21 / SR 946.51	Special instructions (usage, assembly, safe operation, maintenance, necessary warnings and other useful instructions) and precautions on how to use the final product if necessary.
7	Instruction manual	DIN 12546-1 6.4, Table 5	-	The instruction leaflet may contain at least following information and statement: (in at least one official language (DE/IT/FR)) a. Do not use for the carrying or storage of ice cubes unless equipped with a plastic insert because the transportation of ice cubes might damage the inner liner'. b. Do not use to store or carry carbonated drinks', unless clearly and positively marked by the manufacturer. c. In order to minimize bacterial growth, do not use to keep warm milk products or baby food'. d. Glass inner fillers are fragile. If mishandled or dropped the inner filler may break. Do not drink directly from the container as the contents could contain broken glass, especially if there are signs of leakage'. e. Pre-heat or pre-cool the container with water to ensure efficient use and to reduce the risk of breakage of the glass filler. Never use microwave or conventional ovens for this purpose'. f. The container should be periodically cleaned. The best results are obtained using a mixture of water and bicarbonate of soda or washing up liquid. Rinse thoroughly afterward'. g. Never use in a dishwasher', unless otherwise stated by the manufacturer.
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).
Chemical requirements				
Metals and alloys (With or without food contact)				
10	Lead/ Cadmium/ Arsen (total content)	ICP-MS	SR 817.023.21	< 0,05 % Lead < 0,01% Cadmium < 0,03% Arsen; into the drink with 4% citric acid solution of 80 degrees Celsius after 24h
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

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14	Specific Metal Release	EN 13130 / ICP and ICP-MS	Not regulated in CH Manor requirement to follow Resolution CM/Res (2013)9	<p>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:</p> <table border="1"> <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																																																																																								
Plastics (for Handles/ Non-Food Contact Part)																																																																																												
16	Lead (Pb), total content	Acid digestion / AAS or ICP	SR 814.81 REACH	Without food contact: 500 mg/kg																																																																																								
17	Cadmium (Cd), total content	Acid digestion / AAS or ICP	SR 814.81	Without food contact: 100 mg/kg																																																																																								
18	Polycyclic aromatic hydrocarbons (PAH) (Annex 1) (critical) in grip and sheath	AfPS GS 2019:01 PAK	Not regulated in CH Annex XVII, REACH	Only in EU: 8 PAH: ≤ 1 mg/kg (each)																																																																																								
19	Polycyclic aromatic hydrocarbons (PAH) (critical) in the plastic for caps, mugs; takeaways	AfPS GS 2019:01 PAK	Not regulated in CH Annex XVII, REACH	Only in EU: 8 PAH: must not contain (each < 0.2 mg/kg)																																																																																								
20	Organotin (expressed as tin)	Solvent Extraction / GC-MS	Not regulated in CH Annex XVII, REACH	≤ 0.1% (Tri-substituted Organostannic Compounds) ≤ 0.1% (Dibutyltin (DBT) Compounds) ≤ 0.1% (Di-octyltin (DOT) Compounds)																																																																																								
21	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)																																																																																								
Paints and varnishes																																																																																												
22	Colourants	In House	SR 817.023.21 (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.																																																																																								
23	Lead (Pb), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 Annex 2	n.d. in coating 100 mg/kg																																																																																								
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Plastics (With food contact) (specific requirements for Switzerland listed in Annex 2 SR 817.023.21 LGV): https://www.blv.admin.ch/dam/blv/de/dokumente/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/lebensmittelrecht2017/anhang-2-verordnung-materialien-kontakt-lm-gg.pdf.download.pdf/Anhang_2.pdf Logbook of changes from former CH Law: 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																																																																																												
25	Lead (Pb), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	in Plastics: n.d. (2 mg/kg)																																																																																								
26	Cadmium (Cd), total content	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	in Plastics: n.d. (0,5 mg/kg)																																																																																								
27	Colour release	24th Common. 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																																																																																								

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No	Parameter	Method	Reference	Requirement																											
28	Polycyclic aromatic hydrocarbons (PAH) (Annex 1) (critical) in Plastic contact surface of the closure	AfPS GS 2019:01 PAK	SR 817.023.21 (EU) 10/2011	8 PAH: n.d. 0.2 mg/kg (each)																											
29	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)																											
30	Overall Migration	EN 1186	SR 817.023.21 (EU) 10/2011	≤ 10 mg/dm ² or 60 mg/kg																											
31	Specific Migration of Elements	EN 13130	SR 817.023.21 (EU) 10/2011	Specific migration shall not exceed the requirements depending on plastic type (please see the requirements in FFU101for plastic items)																											
32	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																											
33	Sensory test	DIN 10955	(EU) 1935/2004	< 3																											
Glass (With or without food contact)																															
34	Lead and Cadmium	EN 1388 7086-1 (24 hours at 22 ° C to 4 % acetic acid)	SR 817.023.21 BedGgstV 84/500/EEC (EU) 69/493/ EWG Mandatory confirmation about the compliance for all products	In CH Regulated: for hollow articles, deeper >25mm but <3L; Lead - 4,0 mg/L; Cadmium - 0,3 mg/L; Remark: (Limits for main product & lid together)																											
35	Lead and Cadmium (additional requirements)	EN 1388 7086-1	Not regulated in CH Annex 4/ BedGgstV 84/500/EEC	-For caps & mugs (recommended): Lead - 0,5 mg/L Cadmium - 0,25 mg/L -For microwave (recommended): Lead - 0,5 mg/L Cadmium - 0,25 mg/L																											
Rubber items (With or without food contact)																															
36	Overall migration	EN 1186	SR 817.023.21 BfR XXI(Germany)	≤ 10 mg/dm ² / 60 mg/kg (migration of div. Classes I, II, III in accordance with BfR XXI)																											
37	Colour release	24th Commun. on the testing of plastics, BGLB 15 (1972) 285	SR 817.023.21 BfR XXI(Germany)	Coloured plastics, silicone, rubber with food contact: no color release																											
7. Silicon items (With or without food contact) (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																															
38	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																											
39	Volatile organic components (VOM)	BfR XV, gravimetry	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: (at 200 ° C for 4 hours) ≤ 0.5% (w/w)																											
40	Overall migration	Directives EN 1186	SR 817.023.21 EU ResAP (2004)5	In Switzerland is mandatory: ≤ 10 mg/dm ² / 60 mg/kg;																											
41	Primary aromatic amines	DIN 13130, UV/Vis	SR 817.023.21 ResAP (2004)5	In Switzerland is mandatory: n.d. (sum 0,01 mg/kg) (Food simulant)																											
42	Specific Metal Release	Acid digestion / AAS or ICP	SR 817.023.21 ResAP (2004)5	In Switzerland is mandatory <table border="1"> <thead> <tr> <th>No</th> <th>Element (food)</th> <th>SRL (mg/kg)</th> </tr> </thead> <tbody> <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> </tbody> </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
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7	Manganese	0.6																													
8	Zinc	5																													
43	Specific migration of formaldehyde	DIN 13130, UV/Vis	SR 817.023.21 ResAP(2004)5	In Switzerland is mandatory: SRL ≤ 15 mg/kg food simulant																											

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No	Parameter	Method	Reference	Requirement
44	PAK (only if colored)	A/PS GS 2019:01 PAK	Not regulated in CH § 30 LFGB	8 PAH: n.d. < 0.2 mg/kg (each)
45	Sensory test	DIN 10955	Not regulated in CH (EU) 1935/2004 ResAP(2004)5	< 3
46	Color release	24th Commun. on the testing of plastics, BGBL 15 (1972) 265	SR 817.023.21 (EU) 1935/2004	Coloured plastics, silicone, rubber with food contact: no color release
47	Lead (Pb)	DIN EN ISO 11885, ICP-OES	SR 817.023.21 § 30 LFGB	n.d. (2 mg/kg)
48	Cadmium (Cd)	DIN EN ISO 11885, ICP-OES	SR 814.81 § 30 LFGB	n.d. (0.5 mg/kg)
Product specific requirements				
FUNCTIONAL TESTS				
49	Hygiene	Actual Use	-	All surfaces intended to come into contact with food shall be easily cleanable under normal circumstances. Allowed: some parts on the item are not possible to be cleaned due to small and restricted openings etc.
50	Dyes migration	Actual Use (for kids only)	-	5 x cleaning with white cotton textile piece, moistened in warm water. No leave of any colors. Stable Dyes, no migration allowed.
51	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
52	Comfort of Use	Actual Use	-	Fill up with hot 100°C water, wait for 5 Min, hold to move for 2 m distance. Results: easy or little bit heavy to hold and move.
53	Drop Impact Test (not applicable for glass)	EN 12546-1	-	For Non-Vacuum insulated containers: Fill with water to its claimed volume, perform 3 drops from a height of 80 cm onto a concrete (tile) floor. Sample may produce breakage/cracking. No function loss, impact on thermal performance or damages on cap closure or leakage. For vacuum insulated: At room t, fill the insulated container with water to its full capacity, 3 drops from height of 10 cm, onto a horizontal hard-wood board (> 3 cm thick)
54	Stability Test	EN 12546-1	-	The empty and full filled sample shall not overbalance on a 10-degree slope in all directions.
55	Lid Leakage Test	Actual Use	-	Fill the container for 3/4 with water 60°C and cleaning detergent with 0,5 % of a surfactant. Close the lid completely and place the product on the lid-side for 10 minutes. Ground appears to be a little wet (5%) after 5 min.
56	Stopper leakage (if Applicable)	DIN 12546-P.5.6	-	For flask: Fill 75% of claimed capacity with water 95°C with 0,5 % of a surfactant. Close stopper with a torque of 2 Nm or push in the stopper to its furthest extent. Invert for 10 min. No drops shall appear on the stopper, spot or casing. For cool jugs / barrels: same, water at room temperature and lie the container on its side. No drops of water shall escape from the closure within 5 min.
57	Cap closure durability test	Actual Use	-	No Failure, no leakage after 100 times closing and opening.
58	Cross-Cut Adhesion Test (For Paint and Coating on Metal Part)	EN ISO 2409	-	Shall comply with Class 1 according to EN ISO 2409.
59	Resistance To Corrosion (Applicable only for metal part)	ISO 9227	-	After 24 hours in 0.5% salt detergent /surfactant at 80 °C +/- 5 °C till claimed volume, after 6 h staying empty: Not dry, there shall be no major discoloration in appearance or any major corrosion that would affect the overall product performance.

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PHYSICAL CHARACTERISTICS																																														
60	Overall Dimensions (cm & inch) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).																																										
61	Overall Weight (kg & lbs) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).																																										
62	Handle Strength (if Applicable)	DIN 12546-P.5.9	-	Twice heavier as claimed for 60 Min. free fall from 100mm before suspen for 1 hour.																																										
63	Volume or Capacity (L or lq. oz) (if claimed)	Standard Measure	-	Report Actual. Shall comply with any claims (-0%, +5%).																																										
PERFORMANCE TESTING																																														
64	Pouring	DIN 12546-P.5.2	-	When black tea or coffee is poured from 5cm height out of the insulated container, may be little spluttering.																																										
65	Dishwashing durability (if Applicable)	Following EN 12875-1	-	Except aluminium and cast iron unless claimed to be dishwasher safe: 125 cycles according to the care instruction if any. No breakage, adverse effects, no damage. Allowed: slight discoloration; no unpleasant smell. If failure, must include warning label on package.																																										
66	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.																																										
67	Heat loss (critical) (for vacuum insulated items)	DIN 12546-P.5.4	-	Pre-heat for 5 Min; Fulfill till claimed volume hot 95°C water, close with lid, leave for 6 hours by room t. Table 3 — Minimum temperatures (°C) for vacuum insulated containers <table border="1"> <thead> <tr> <th>Capacity (in ml)</th> <th>flasks</th> <th>carafes</th> <th>food-flasks</th> <th>air-pots</th> </tr> </thead> <tbody> <tr> <td>0 to 200</td> <td>60</td> <td></td> <td></td> <td></td> </tr> <tr> <td>201 to 400</td> <td>65</td> <td>60</td> <td>50</td> <td>50</td> </tr> <tr> <td>401 to 600</td> <td>70</td> <td>65</td> <td>60</td> <td>60</td> </tr> <tr> <td>601 to 800</td> <td>75</td> <td>70</td> <td>62</td> <td>70</td> </tr> <tr> <td>801 to 1200</td> <td>78</td> <td>75</td> <td>66</td> <td>70</td> </tr> <tr> <td>>1200</td> <td>80</td> <td>78</td> <td>70</td> <td>75</td> </tr> </tbody> </table>	Capacity (in ml)	flasks	carafes	food-flasks	air-pots	0 to 200	60				201 to 400	65	60	50	50	401 to 600	70	65	60	60	601 to 800	75	70	62	70	801 to 1200	78	75	66	70	>1200	80	78	70	75							
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801 to 1200	78	75	66	70																																										
>1200	80	78	70	75																																										
68	Heat loss (critical) (for non-vacuum insulated items)	DIN 12546-P.5.4	-	Pre-heat for 5 Min; Fulfill till claimed volume hot 95°C water, close with lid, leave for 6 hours by room t. Table 4 — Minimum temperatures (°C) for non-vacuum insulated containers <table border="1"> <thead> <tr> <th>Capacity (in ml)</th> <th>flasks</th> <th>carafes</th> <th>air-pots</th> <th>food-flasks</th> <th>cool jug / barrel</th> </tr> </thead> <tbody> <tr> <td>0 to 200</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>201 to 400</td> <td>38</td> <td>38</td> <td>38</td> <td>35</td> <td>35</td> </tr> <tr> <td>401 to 600</td> <td>40</td> <td>40</td> <td>40</td> <td>37</td> <td>37</td> </tr> <tr> <td>601 to 800</td> <td>45</td> <td>45</td> <td>45</td> <td>42</td> <td>42</td> </tr> <tr> <td>801 to 1200</td> <td>50</td> <td>50</td> <td>50</td> <td>47</td> <td>47</td> </tr> <tr> <td>>1200</td> <td>55</td> <td>55</td> <td>55</td> <td>52</td> <td>52</td> </tr> </tbody> </table>	Capacity (in ml)	flasks	carafes	air-pots	food-flasks	cool jug / barrel	0 to 200						201 to 400	38	38	38	35	35	401 to 600	40	40	40	37	37	601 to 800	45	45	45	42	42	801 to 1200	50	50	50	47	47	>1200	55	55	55	52	52
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>1200	55	55	55	52	52																																									
69	Thermal Shock	DIN 12546-P.5.5	-	Shall withstand the thermal shock Δt80 for 5 min. No crack on surface is allowed, no function loss.																																										

Product specific requirements: 106. Insulated Container

Version: 3.0
Last update: 07.04.2022

Material	Products	Remark
Metall, Plastic, Glass	Vacuum Ware, Insulated Flasks, Mugs, Jugs, Insulated Container, Thermos	-



No	Parameter	Method	Reference	Requirement
ADDITIONAL PERFORMANCE TESTING FOR FOOD ITEMS				
70	Stain Resistance (only for plastic food products)	Actual Use	-	No permanent staining after applying spaghetti sauce to different spots. Let stand 2 hours. Wash 1 cycle in hot dishwasher (Or if not dishwasher safe, soak 30 min. in hot, soapy water).
71	Heat Transmission (Warming of the outer surface) (critical)	Actual Use Following DIN EN ISO 13732-1	-	Fill the sample with hot food (soup 80°C) and just cool down in room temperature for 1 hours with closed lid, measure the t continually. Write max t . Maximum surface or handle t: 48°C
ADDITIONAL PERFORMANCE TESTING FOR LIQUIDS				
72	Thermal Retention for cool drinks (critical) (Applicable for Thermos and Travel Mug)	In House Method	-	Fill 5 °C water to 50% capacity of sample. Start recording the temperature and measure the temperature every 15 minutes until it rises to 15°C. Report the initial and final temperature as well as capacity of the sample. Results: 200-500 ml = 12 h // 500- 1000ml = 18 h
73	Heat Transmission (Warming of the outer surface) (critical) Specification For closed vacuum Items, Insulated Flasks and Jugs	Following DIN EN ISO 13732-1	-	Fill the sample with boiling water, close the cup and just cool down in room temperature for 1h, measure continual the surface or handle temperature. Maximum surface temperature: 55°C
74	Heat Transmission (Warming of the outer surface) (critical) Specification for Coffee Jugs takeaway	Following DIN EN ISO 13732-1	-	Fill the sample with boiling water, close the cup and measure t in room temperature 10 min, then measure the surface or handle temperature. With handle- Maximum handle temperature: 55°C Without handle - Maximum surface temperature with skin contact: 50°C
75	Heat Transmission (Warming of the cap) (critical)	Actual Use Following DIN EN ISO 13732-1	-	Fill the sample with hot water 80°C and measure t after 10, 60 sec and 5 min. Maximum t of cap surface: < 48°C