

Product:	<b>Metalware [Food contact]</b>		
Scope:	Food contact Metalware, such as stainless steel kitchen gadgets, metal containers and metallic cookware & bakeware etc.	Protocol No.	TYCP-02041-NA
		Version	1.0
		Issue Date	15 Jan 2013
		Prepared by	Intertek HK - TFH
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**NB: Where there is no applicable US or CN standard, Intertek has chosen the most relevant International standards to assess the product safety and performance. For undated references, the latest edition of the referenced document (including any amendments) applies.**

Attribute	Citation	Requirement / Limit	Result
<b>Supplemental Protocols</b>			
<b>For US Only</b>			
*†CA Prop 65 (mandatory in state California)	Intertek Protocol	Consent Judgment of related court cases based on California Proposition 65.	
*†Children's Products Supplemental (Required if the product is graded as a children product)	Refer to TYCP-00004-US	Shall comply with all requirements in TYCP-00004-US.	
*†CPSIA Supplemental	Refer to TYCP-00001-US	Shall comply with all requirements in TYCP-00001-US.	
<b>For Canada Only</b>			
*†Children's Products Supplemental (Required if the product is graded as a children product)	Refer to TYCP-00004-CN	Shall comply with all applicable requirements.	
<i>Note: Additional cost, sample size &amp; TAT may be required if testing to one or more supplemental protocols is necessary. Please refer to the above referenced supplemental protocol(s) for additional information.</i>			
<b>Chemical Analysis</b>			
<b>For both US and Canada</b>			
*Food Grade Stainless Steel	With Reference to NSF/ANSI 51 / ITS-M0122	AISI 200, 300 and 400 series stainless steel are all acceptable for food use, so are other stainless steel grades with a minimum of 16 % chromium content. In the case of cutlery / blades and similar applications requiring a sharp edge, the chromium content can be lower than 16 % if they are tempered or hardened by an appropriate post-heat treatment process.  (In lieu of testing, a passing test report may be submitted for review if dated within one year)	
*Soluble Heavy Metals	EN 14350-2:2004 (Scope widened)	Shall meet the requirements of Sb ( $\leq 15$ ppm), As ( $\leq 10$ ppm), Ba ( $\leq 100$ ppm), Cd ( $\leq 20$ ppm), Cr ( $\leq 10$ ppm), Pb ( $\leq 25$ ppm), Hg ( $\leq 10$ ppm), Se ( $\leq 100$ ppm).	
<b>For US Only</b>			
*Lead Content of Paints or Similar Surface Coating	16 CFR 1303 (Scope widened)	Shall not contain Lead or Lead compounds in which the Lead content is in excess of 0.009% by weight of the total content (90ppm).	
*Food Contact Requirement	FDA Regulation 21CFR Part 177-199	Must meet the requirement.	

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*†Extractable Lead & Cadmium – Silver-plated	FDA CPG 7117.05 & 7117.06	Cd: ≤ 0.25 ppm (Lg. Hollowware/Pitchers) ≤ 0.5 ppm (Sm. Hollowware/Cups/Mugs) ≤ 0.5 ppm (Flatware and other non-filled products) Pb: < 7.0 ppm for adult < 0.5 ppm for children	
*Lead (Pewter Alloys)	FDA Food Code: Chapter 4	500 ppm total weight.	
*Lead (Solder and Flux)	FDA Food Code: Chapter 4	2000 ppm total weight.	
*Extractable Cadmium & Lead in tableware	California Health and Safety Code section 108860	Cd: 0.25 ppm (Large Hollowware / Pitchers) 0.5 ppm (Small Hollowware / Cups / Mugs) 0.5 ppm (Flatware) Pb: 1.0 ppm (Large Hollowware) 2.0 ppm (Small Hollowware) 0.5 ppm (Cups / Mugs / Pitchers) 3.0 ppm (Flatware)	
*†Toxic Elements in Packaging Components	TPCH	Shall comply with TPCH in those states with legislation. Total concentration of Pb, Cd, Hg and hexavalent Cr ≤ 100 ppm.	
<b>For Canada Only</b>			
*Total Lead in Surface Coating	Canada Consumer Product Safety Act, Surface Coating Materials Regulations (Scope widened)	Shall not exceed 0.009% (90ppm) total lead.	
*†Lead Content of Consumer Products Contacting with Mouth	Canada Consumer Product Safety Act, Consumer Products Containing Lead (contact with mouth) Regulations	The following products shall not contain more than <b>90 ppm</b> total lead (90 mg of lead per per kilogram of product ):  (1) products, other than <b>kitchen utensils</b> , whose normal pattern of use requires that they be brought to the <b>user's mouth</b> ; and (2) products in respect of which it is reasonably foreseeable, based on their nature, that they would be used by children under <b>3 years of age</b> in learning or play.	
*Lead Content - Foodware (By request only)	Proposed Lead Risk Reduction Strategy by Health Canada	Each individual component shall not exceed 0.06 % by weight in total Lead content and migratable Lead shall not exceed 0.009 % by weight.	
<b>Physical Characteristic</b>			
Overall Dimensions	ITS-M0059	Report overall dimensions; shall meet label claims (if applicable).	
Overall Capacity	ITS-M0059	Report overall capacity; shall meet label claims (if applicable).	
Wall Thickness (Stainless steel only)	ITS-M0059	Report wall thickness; shall meet the claimed value.	
Dimension – Inner diameter	ITS-M0059	Report inner diameter; shall meet label claims (if applicable).	
Weight	ITS-M0059	Report weight; shall meet label claims (if applicable).	
Joint	ITS-M0059	No Gap In Excess Of 0.012 Inches (0.3mm)	

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Parts Inventory	ITS-M0059	Shall meet label claims.	
Material Type	ITS-M0060	As claimed or observed	
<b>Construction &amp; Workmanship</b>			
Sharp Points / Edges	16 CFR 1500.48 / 1500.49 (Scope Widened)	Shall have no sharp points/edges, other than those required for function.	
Defects	Visual Check	Shall have no discernible surface degradation, including crazing, shivering, bubbles, cracks, stains, deformations, chips, fractures, heavy lines, waves, shear marks, scratches, scuff marks, indentations, or blisters.	
Workmanship	Visual Check	Shall have no components missing, malformed, and/or fractured.	
<b>Performance Test</b>			
- (a) General performance for all metallic food contact articles			
Functionality	ITS-M0061	Shall function as intended as received.	
Tilt Resistance / Stability	ITS-M0015	Shall remain stable at 10° incline without tipping after fully filled with water. Notes: this is applicable for free standing items (if applicable).	
Firmness Of Handle Attachment	ITS-M0024	No detachment <i>Condition:</i> <i>Tension of 20 lbs for 10 sec</i>	
*Durability and Fitness of Accessories	Actual Use	Shall withstand repeat detaching / attaching and/or opening / closing of the accessories 100 times. e.g. assemble / disassemble the lid with the main body	
*Freezer Safe (if applicable)	ITS-M0004	No adverse effects when 80 % filled with water and left frozen for 24 h.	
*Effect of Extreme Temperature and Humidity	ITS-M0007	16 h @ 0° F (-18° C) & 8 h @ 120° F (49° C) / 95% RH with no failure or visual change.	
*Dishwasher Safe	ITS-M0001	10 cycles of normal wash with domestic detergent - No color change nor adverse effects.	
*Handwash Safe (For items having the equivalent claims such as "Handwash only" OR "Not dishwasher safe")	ITS-M0003	Shall be no adverse effect after 10 handwash cycles using domestic detergent rubbed with damp cloth gently with warm water (140°F/ 60°C), followed by a rinse of tap water.	
*Moisture Content (Wood / bamboo only)	ITS-M0054 (Oven Dry Method)	Shall be between 8-12%.	
*Resistance to Corrosion (For accessible metal components)	ASTM B117 (Modified)	Shall withstand 24 hours in 1% salt spray (fog) with no major corrosion or visual change. (Modification = 1% salt spray (fog))	
*Transit Testing (By request only)	ISTA Procedure as Appropriate to Package	Packaged product shall be tested to applicable ISTA procedure and method, based on package configuration. Inspect package and product for damage upon completion of test. Report results.	
- (b) specific for cookware / bakeware / gadgets			
Impact Resistance (for kitchenware items with plastic handles)	ITS-M0053	No loosening in handle or other visible damage on item <i>Drop in a vertical position with handle pointing downward from a height 1.2m (3.94 ft) onto a concrete floor 5 times.</i>	

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Attribute	Citation	Requirement / Limit	Result
Temperature of Grip While Boiling Water	ITS-M0061	Temperature of handle shall be less than 190°F unless handle warning is provided.	
*Thermal Shock Endurance for Lid (For glass lid)	DD CEN/TS 12983-2:2005 Clause 7.2	No cracking, crazing or chipping at 257°F (125°C)	
Oven Safety	ITS-M0005	No visible damage (discoloration is acceptable) after 1 hour in 500°F (for metallic articles) or 350°F (non-metallic articles) oven.	
Handle Strength (For pots and pans)	CMA Standards Manual, Clause 3.3.1 & 3.3.2 (Modified)	<p><u>For articles with single stick handle</u> Shall withstand 350°F / 40 mins, then remove from the oven and support a weight (placed in the center of the pan) equal to 8.8lb or twice the weight of the water capacity (whichever is greater), plus the weight of any lid, for 1 minute.</p> <p><u>For articles with side handle assemblies &amp; stick handles with helper handles</u> Shall withstand 350°F / 40 mins while supporting a weight (placed in the center of the pan) equal to 2 times the weight of water capacity, plus the weight of any lid, for 1 minute.</p>	
Handle Strength for Lid	CMA Standards Manual, Clause 3.3.8	The knob assemblies shall withstand a maximum of 350°F, or recommended use temperature without functional failure while supporting the cover AND a weight equal to the cover.	
Torque Resistance	CMA Standards Manual, Clause 3.3.3	Shall be no deflection of greater than 10° or damage to the handle, its ferrule or fixing system.	
Boil Dry Test	CMA Standards Manual, Clause 7.9	Place the empty pan on an appropriately sized electric burner with high setting for ten minutes or five minutes for pans of a 1.5 quart capacity or smaller.  Upon removal from the burner there should be no separation of the base from the body of the pan and no molten metal escaping from the body / base juncture.	
*Handle Fatigue	CMA Standards Manual, Clause 3.3.5	No distortion is allowed unless it is less than 5% of the handle length measured at the end of the handle which does not affect its safety or function.	
*Resistance to Salt and Acid Test (For articles with non-stick coating)	CMA Standards Manual Clause 21.4.5	Total blistered area shall be less than ½ square inch.	
*Life Cycle Endurance Test (For articles with non-stick coating)	CMA Standards Manual Clause 21.6.3	Shall leave no portion greater than 10% of the surface area of the pancake still adhering to the test surface.	
- (c) specific for non-cooking purpose food contact metalwares such as containers and dinnerwares			
Drop Test	ITS-M0053	Shall withstand 3 drops in various orientations from 3 feet height onto vinyl-clad cement floor after fully filled with water.  Note: for metallic containers and bottles.	
Leakage (if claimed to be leak free)	Visual Check	The item shall be air-tight. No leaking when caps are tightened, with the 80% water-filled bottle shaken in various orientation and then placed upside down on tissue paper for 1 h.	

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*Insulation Property (for bottles with insulation claims)	EN 12546-1:2000 Cl. 3.4.1, 5.4	Report the measured temperature and compared with table 3 of the standard.											
<b>Labeling Requirement</b>													
Parts Labeling	ITS-M0060	Shall match the actual content if present.											
Use Labeling	ITS-M0060	Use/care instructions that are clear and understandable shall be provided in language appropriate to destination countries.											
Instructions	ITS-M0060	Shall include assembly, use, maintenance, and safety information as required with no errors or spelling mistakes.											
Verify Label Claims	Actual Use	Shall comply with all claims.											
<b>For US Only</b>													
†One Time Use Products Fair Packaging and Labeling Act OR All Other Products Uniform Packaging and Labeling Regulations	F.P. & L. Act (16 CFR 500) OR NIST Uniform Laws and Regulations Handbook 130	Manufacturer, packer, or distributor's name & address (city, state & zip).											
		Product Identification.											
		Net quantity of contents shall be expressed in terms of weight or mass, measure, numerical count, or combination so as to give accurate information to facilitate consumer comparison (U.S. and metric units).											
†Country of Origin Marking	19 CFR 134.11	Shall indicate country of origin legibly, permanently, and in comparable size and close proximity to any mention of country other than country in which the article was manufactured or produced. Shall be visible at point of purchase.											
†Plastic Bag Warning Statement (If applicable)	Visual Check / Requirements Based on Various State Laws	<p>If plastic bags with a thickness less than 1 mil and an opening size <math>\geq 5"</math> in diameter are present, the following warning statement shall be printed in a prominent place on each bag in English and appeared on both sides:</p> <p><b>WARNING: Keep this bag away from babies and children. Do not use in cribs, beds, carriages or playpens. The thin film may cling to nose and mouth and prevent breathing. This bag is not a toy.</b></p> <p>If the total length and width is <math>&gt; 40"</math>, the warning shall be repeated in 20-inch intervals. The font size shall adhere to:</p> <table border="1"> <thead> <tr> <th>Total Length and Width of Bag</th> <th>Font</th> </tr> </thead> <tbody> <tr> <td>60 inches or more</td> <td>at least 24 point</td> </tr> <tr> <td>40 inches to less than 60 inches</td> <td>at least 18 point</td> </tr> <tr> <td>25 inches to less than 40 inches</td> <td>at least 14 point</td> </tr> <tr> <td>less than 25 inches</td> <td>at least 10 point</td> </tr> </tbody> </table>	Total Length and Width of Bag	Font	60 inches or more	at least 24 point	40 inches to less than 60 inches	at least 18 point	25 inches to less than 40 inches	at least 14 point	less than 25 inches	at least 10 point	
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†Pre-packaged Product	Consumer Packaging and Labelling Act, R.S. 1985, c. C-38 and Regulations, C.R.C., c. 417	<p>The net quantity declaration shall present on Principal Display Panel (PDP) in English and French, metric units.</p> <p>The numerical quantity shall be bold type with letter height based on the size of Principle Display Surface (X):</p> <table border="1"> <thead> <tr> <th>Size of Principle Display Surface</th> <th>Minimum letter height</th> </tr> </thead> <tbody> <tr> <td><math>X \leq 32 \text{ cm}^2</math> (5 in<sup>2</sup>)</td> <td>1.6 mm (1/16 in)</td> </tr> <tr> <td><math>32 \text{ cm}^2 &lt; X \leq 258 \text{ cm}^2</math> (40 in<sup>2</sup>)</td> <td>3.2 mm (1/8 in)</td> </tr> <tr> <td><math>258 \text{ cm}^2 &lt; X \leq 645 \text{ cm}^2</math> (100 in<sup>2</sup>)</td> <td>6.4 mm (1/4 in)</td> </tr> <tr> <td><math>645 \text{ cm}^2 &lt; X \leq 25.8 \text{ dm}^2</math> (400 in<sup>2</sup>)</td> <td>9.5 mm (3/8 in)</td> </tr> <tr> <td><math>25.8 \text{ dm}^2</math> (400 in<sup>2</sup>) &lt; X</td> <td>12.7 mm (1/2 in)</td> </tr> </tbody> </table> <p>All other information in the net quantity declaration (i.e. units of measurement statements, abbreviations, symbols, etc.) shall be shown in minimum 1.6 mm letter height.</p> <p>Product identification shall be shown on Principal Display Panel (PDP) in English and French, minimum 1.6 mm letter height.</p> <p>Dealer's name and principal place of business (address) shall be shown on any part of label except bottom, English or French, minimum 1.6 mm letter height. For imported goods, the name and address of the dealer outside Canada or the name and address of Canadian dealers shall be preceded by "imported by" ("<i>importé par</i>") or "imported for" ("<i>importé pour</i>"), unless a statement of geographic origin is located immediately adjacent to the name and address of a Canadian dealer, and shown with letter height at least as large as those used in the declaration of the Canadian dealer's principal place of business.</p>	Size of Principle Display Surface	Minimum letter height	$X \leq 32 \text{ cm}^2$ (5 in <sup>2</sup> )	1.6 mm (1/16 in)	$32 \text{ cm}^2 < X \leq 258 \text{ cm}^2$ (40 in <sup>2</sup> )	3.2 mm (1/8 in)	$258 \text{ cm}^2 < X \leq 645 \text{ cm}^2$ (100 in <sup>2</sup> )	6.4 mm (1/4 in)	$645 \text{ cm}^2 < X \leq 25.8 \text{ dm}^2$ (400 in <sup>2</sup> )	9.5 mm (3/8 in)	$25.8 \text{ dm}^2$ (400 in <sup>2</sup> ) < X	12.7 mm (1/2 in)	
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The Language of Inscription (mandatory in Quebec)	The Charter of French Language, Title I, Chapter VII, Clause 51 & Regulations adopted under the Charter of French Language	<p>Every inscription on the following shall be drafted in French,</p> <ul style="list-style-type: none"> <li>- product</li> <li>- product container or wrapping</li> <li>- document or object supplied with it (e.g. directions for use, warranty certificates)</li> </ul> <p>No inscription in another language may be given greater prominence than that in French. For exceptions, check the following webpage:- <a href="http://www.olf.gouv.qc.ca/english/regulations/reg_business.html#div1">http://www.olf.gouv.qc.ca/english/regulations/reg_business.html#div1</a></p>													
†Country of Origin	Customs Tariff, Marking of Imported Goods Regulations, SOR/94-10	The country of origin marking of Non-NAFTA imported goods shall be present in English or French.													

**Remark:** Additional tests may be incurred subject to the final samples reviewed by Intertek.

**Key:** \*: Additional charge items

†: Mandatory Requirement

**Testing Charge & Sample Size & Turnaround Time**

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<b>Basic Package Price (Listed Price)</b>	USD 200 (in which USD 97 is not discountable) for one market; Additional USD 23 for both markets	
<b>Sample size for basic package</b>	4 sets (additional samples may be required for tests with additional charge)	
<b>Turnaround time for basic package</b>	7 working days	
<b>Additional charge (Subject to client discount)</b>		<b>Additional sample size</b>
a. CA Prop 65	On Quote	Subject to actual sample
b. Children's Products Supplemental - US	Refer to TYCP-00004-US	Refer to TYCP-00004-US
c. CPSIA Supplemental	Refer to TYCP-00001-US	Refer to TYCP-00001-US
d. Children's Products Supplemental - CN	Refer to TYCP-00004-CN	Refer to TYCP-00004-CN
e. Food Grade Stainless Steel (NSF/ANSI 51)	On Quote	Subject to actual sample
f. Soluble Heavy Metals	USD 81 per result	Subject to actual sample
g. Lead Content of Paints or Similar Surface Coating (US)	USD 31 per coating	0.5 grams of coating on finished product
h. Food Contact Requirement	On Quote	Subject to actual sample
i. Extractable Lead & Cadmium – Silver-plated	USD 52 per test	6 pieces
j. Lead (Pewter Alloys)	On Quote	Subject to actual sample
k. Lead (Solder and Flux)	On Quote	Subject to actual sample
l. Extractable Cadmium & Lead in tableware	On Quote	6 pieces
m. Toxic Elements in Packaging Components	USD 54 per result	0.5 grams per material
n. Total Lead in Surface Coating (CN)	USD 31 per coating	0.5 grams of coating on finished product
o. Lead Content of Consumer Products Contacting with Mouth	USD 31 per result	0.5 grams
p. Lead Content - Foodware	On Quote	Subject to actual sample
q. Durability and Fitness of Accessories	USD 45 per accessories	1 piece
r. Freezer Safe	USD 47 per result	1 piece
s. Effect of Extreme Temperature and Humidity	USD 64 per result	2 pieces
t. Dishwasher Safe	USD 95 per result	1 piece
u. Handwash Safe	USD 101 per result	1 piece
v. Moisture Content	USD 37 per result	1 piece
w. Resistance to Corrosion	USD 54 per result	2 pieces
x. Transit Testing	ISTA 1A: USD 179 ISTA 1B: USD 231	1 full carton with products
y. Handle Fatigue	USD 128	1 piece
z. Resistance to Salt and Acid Test (For articles with non-stick coating)	USD 256	5 pieces
aa. Life Cycle Endurance Test (For articles with non-stick coating)	USD 450	1 piece
bb. Insulation Property (for bottles with insulation claims)	USD 128 per item	1 piece
<b>Remark:</b> Price quoted is <b>Listed</b> price based on our Hong Kong laboratory pricing. Please check with local laboratories to confirm exact pricing for your region.		

**Revision History**

Issue No.	Revision date	Changes	Prepared by	Approved by
1.0	05 Oct 2012	Initial release	Mondy Tung	Taylor (Emily) on 08 Jan 2013