



MINIMUM CONSTRUCTION STANDARDS

PRIVATE & EXCLUSIVE BRANDS HOME

CERAMICS

INTENDED FOR FOOD USE

All Private and Exclusive brands must follow Minimum requirements unless otherwise specified in the TP.



MINIMUM CONSTRUCTION STANDARDS CERAMICS

SECTION 1: DEFECT ZONES

Maps locations on the products for imperfection accept/reject assignments.

SECTION 2: CLASSIFICATION OF DEFECTS

Outlines defects that could pose safety liabilities, performance limitations, or be visually unacceptable to the consumer. The list identifies general defects and is a starting point. Vendor should work with the Technical Designer to develop specific standards, where necessary, per product.

SECTION 3: MEASUREMENT TOLERANCES

Lists measurement points and assigned tolerances per product type.

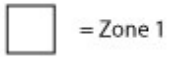
SECTION 4: GLOSSARY

Defines common terms that help align basic understanding of common ceramic terms.

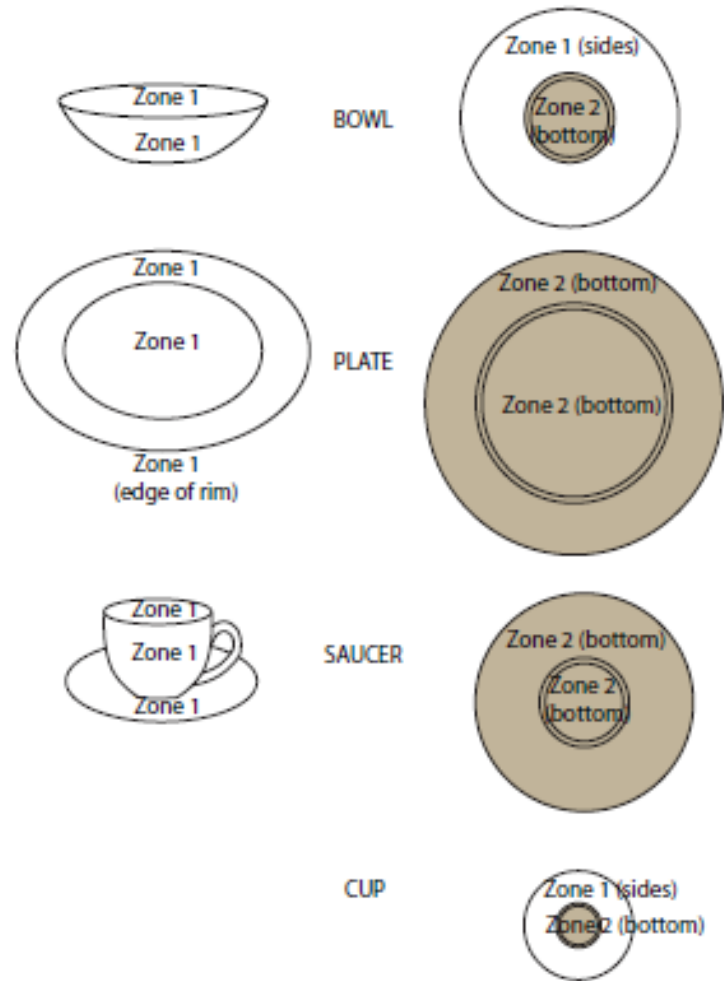
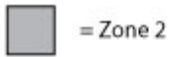
Defect Zones: Product mapping identifying areas of product where questionable dirt/soils and material imperfections may or may not exist.

Defect Zones:

Zone 1: Focal points which are highly visible.



Zone 2: Areas of product not readily visible when in use.





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Classification of Defects: Visual and/or performance imperfections that may cause safety concerns, product failure, affect the usability of the product for its intended purpose or be unacceptable to the customer. (Cosmetic variations viewed at arms length in normal room lighting.)			Zone 1	Zone 2
COLOR	Pattern/ Design	Inaccurate size, placement, and/or quantity of design elements outside of predetermined acceptable range	not acceptable	
		Color stain/pigments used under glaze not completely covered by glaze	not acceptable	
		"Broken" or disrupted spot in decal color	not acceptable	acceptable
		Excessive decal color along edge of plate (where decal runs to edge of plate)	not acceptable	
		Broken color	not acceptable	acceptable
		Streaking	not acceptable	
	Color	Smudge or chalky marks	not acceptable	
		Off-standard color	not acceptable	
		Shading between product components in one unit	not acceptable	
		Shading within a set – multiple units in one set – outside of predetermined acceptable range	not acceptable	
		Streaking	not acceptable	
DIRT/SOILS	Any conspicuous dirt, soil or glue spot	not acceptable		
MATERIALS	Does not meet Minimum Performance Standards	not acceptable		
	Incorrect material – not as specified	not acceptable		
CONTAMINATION	Extra clay under glaze less than or equal to 0.5mm	not acceptable	acceptable	
	Extra clay under glaze greater than 0.5mm	not acceptable		
	Soilage (discoloration) under glaze	not acceptable		
	Color spots (caused by splashing, spitting, or brush mishaps) Less than or equal to 0.5mm, no more than 2 occurrences	acceptable		
	Color spots (caused by splashing, spitting, or brush mishaps) Less than or equal to 0.5mm, no more than 3 occurrences, not clustered	not acceptable	acceptable	
	Iron spots/black spec Less than or equal to 0.5mm, no more than 2 occurrences, not clustered	acceptable		
	Iron spots/black spec Less than or equal to 0.5mm, no more than 3 occurrences, not clustered	not acceptable	acceptable	
	Any contamination at an opening (teapot or pitcher spout, etc.)	not acceptable		

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Classification of Defects: (cont.)		Zone 1	Zone 2		
CONSTRUCTION &/OR ASSEMBLY	Size/Shape Irregularities	Does not match specified shape			
		not acceptable			
		Length, width, height not as specified; not within assigned tolerance		not acceptable	
		Rim/wall thickness not as specified; not within assigned tolerance		not acceptable	
		Warped/bowed (measured as max. deviation between two points on one side)		Round	Square
		Plates:	≤ 150 mm diameter	1.0 mm	1.5 mm
			151 mm – 200 mm diameter	1.5 mm	2.0 mm
			201 mm – 250 mm diameter	2.0 mm	2.5 mm
			251 mm – 300 mm diameter	3.0 mm	3.0 mm
			301 mm – 350 mm diameter	3.0 mm	3.5 mm
			> 350 mm diameter	3.5 mm	4.0 mm
		Platters/Trays:	≤ 250 mm long	3.0 mm	3.5 mm
			251 – 300 mm long	4.0 mm	4.5 mm
			301 – 350 mm long	5.0 mm	5.5 mm
			351 – 400 mm long	6.0 mm	6.5 mm
			401 – 450 mm long	7.0 mm	7.5 mm
			451 – 500 mm long	8.0 mm	8.5 mm
		Bowls/Serving Dishes:	≤ 150 mm diameter	1.0 mm	1.5 mm
			151 mm – 200 mm diameter	1.5 mm	2.0 mm
			201 mm – 250 mm diameter	2.0 mm	2.5 mm
	251 mm – 300 mm diameter	3.0 mm	3.5 mm		
	301 mm – 350 mm diameter	3.5 mm	4.0 mm		
Cups/Mugs:	≤ 50 mm diameter	1.0 mm	1.5 mm		
	51 mm – 100 mm diameter	1.5 mm	2.0 mm		
	101 mm – 150 mm diameter	2.0 mm	2.5 mm		
	151 mm – 200 mm diameter	2.5 mm	3.0 mm		
Items which rock (do not rest flat on the tabletop)		not acceptable			
Openings not fully functional (teapot or pitcher spout, etc.)		not acceptable			
Lid does not close tightly – Lid does not open easily		not acceptable			
Cup does not rest squarely and securely in saucer		not acceptable			
Mould lines on pressed or molded items, not severe enough to break or disrupt the surface/pattern		acceptable			
Raised mould lines on pressed or molded items that distorts surface/design		not acceptable			
Mould filling point cavity or void, not plugged		not acceptable			
Misaligned components (i.e. handles, knobs, etc.)		not acceptable			

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Classification of Defects: (cont.)		Zone 1	Zone 2
Chips and Rough Spots	Chips or broken surface	not acceptable	
	Rim edges not smooth and even	not acceptable	
	Cracks/checks (unless as intended decorative finish)	not acceptable	
	Glazed-over cracks, very small (hairline), around handles on cups/mugs or on bottom of products	acceptable	
	Small bumps less than or equal to 0.5mm, self-colored, non-intrusive (i.e. not in the center of the plate), no more than 3 occurrences	acceptable	
	Foot rough – not sanded, uneven, sharp edges	not acceptable	
Scratches and Pinholes	"Scuff" marks on high quality, bright glazes caused when one plate rubs against another	not acceptable	
	Severe scratches	not acceptable	
	Slight scratches	not acceptable	acceptable
	Pinholes through glaze and into clay to render item non-vitreous	not acceptable	
	Pinholes - not through glaze Maximum size – 0.5mm Not clustered – minimum spacing between pinholes 10cm Must match 'Master Limit' sample.	Maximum # Allowed	Maximum # Allowed
	1	2	
≤ 150 mm diameter	2	3	
151 mm – 200 mm diameter	3	4	
201 mm – 250 mm diameter	4	5	
251 mm – 300 mm diameter	5	6	
301 mm – 350 mm diameter	6	7	
351 mm – 400 mm diameter	7	8	
401 mm – 450 mm diameter			

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Classification of Defects: (cont.)		Zone 1	Zone 2	
	Glaze	Glaze not covering intended areas	not acceptable	
		Pooling	not acceptable	
		Glaze drips	not acceptable	
		Glaze drips, very small	not acceptable	acceptable
		Crazing	not acceptable	
		Underfired body (not fully vitrified and/or absorbs water through the foot)	not acceptable	
		<i>Note: Small pinholes in yellow or white glazes can be touched up and refired if not too deep</i>		
LABELING / PACKAGING	Does not comply with all advertised and labeled claims (i.e. microwave safe, dishwasher safe, oven safe, freezer, etc.)	not acceptable		
	Missing non-food use or special food use warnings	not acceptable		
	Missing, incorrect or misspelled use instruction information	not acceptable		
	Missing, incorrect or misspelled care instruction information	not acceptable		
	Retail packaging insufficient size or strength to support or protect product (where packaged as sets)	not acceptable		
	Shipping carton and shipping material insufficient size or strength to protect product in transit	not acceptable		
MEASUREMENTS: Identified on the Design Sheets / Technical Design Specification and are specific to each style/program. Controlling product dimensions and set component variations is imperative. Tolerances only allow for reasonable manufacturing error. Measurements are a concern and product can be rejected when: <ul style="list-style-type: none"> - One critical measurement is outside of tolerance - Collectively several detail or additional measurement points are out of tolerance and affect aesthetics or use - Any measurement is grossly out of tolerance - Component variation within a set or between items normally purchased as a set is outside of tolerance 		<i>Note: Refer to Measurement Tolerance Standards section for specific information by product type.</i>		

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Measurement Tolerance: Controlling product dimensions and set component variation is imperative.

Item	Measurement Point	Round	Tolerance	Square
Plates/Platters/Trays	Diameter	≤ 150 mm	1.5 mm	2.0 mm
		151 mm – 200 mm	2.0 mm	2.5 mm
		201 mm – 250 mm	2.5 mm	3.0 mm
		251 mm – 300 mm	3.0 mm	3.5 mm
		301 mm – 350 mm	3.5 mm	4.0 mm
> 350 mm		6.0 mm	6.5 mm	
	Length – (oval & oblong platters/trays)	> 350 mm	9.5 mm	
	Shoulder/Rim/Lip border	1.5 mm		
	Height	1 mm		
	Thickness at rim – measured 1 cm from top edge	1 mm		
Bowls/Serving Dishes	Diameter, Top	≤ 150 mm	2.0 mm	2.5 mm
		151 mm – 200 mm	3.0 mm	3.5 mm
		201 mm – 250 mm	3.5 mm	4.0 mm
		251 mm – 300 mm	4.0 mm	4.5 mm
		301 mm – 350 mm	4.5 mm	5.0 mm
> 350 mm		5.0 mm	5.5 mm	
	Height	≤ 50 mm	2.0 mm	
51 mm – 100 mm		2.5 mm		
101 mm – 150 mm		3.0 mm		
151 mm – 200 mm		3.5 mm		
	Thickness of walls – measured 1 cm from top edge	1 mm		
Cups/Mugs	Diameter, Top	≤ 50 mm	1.5 mm	2.0 mm
		51 mm – 100 mm	2.0 mm	2.5 mm
		101 mm – 150 mm	2.5 mm	3.0 mm
		151 mm – 200 mm	3.0 mm	3.5 mm
		Height	≤ 100 mm	2.0 mm
101 mm – 150 mm	2.5 mm			
151 mm – 200 mm	3.0 mm			
201 mm – 250 mm	3.5 mm			
	Thickness of walls – measured 1 cm from top edge	1 mm		

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Glossary of Ceramic Clay Materials:

Bisque – Unglazed, ceramic ware that has been fired once to sufficiently mature the body for handling strength and shrink body sufficiently. Also known as biscuit.

Bone China – Vitreous dinnerware that contains apatite (bone ash) in the formula, 25% up to 50%. Often very dense with a translucent cream color. The whitest, strongest and most translucent dinnerware. Originally developed in England but, now, is made all over the world. Fired at high temperature (1200 degrees Celsius) before glazing and then fired at a lower temperature after glazing to make the glaze feel soft and silky and so that the color sinks into the glaze.

Ceramic – A general term referring to all ware made of inorganic, non-metallic earth minerals (clay and sand), and processed by firing or baking usually by the application of high temperature.

Casual China – This term has changed much over the years but generally refers to earthenware, stoneware and ironstone patterns. Slightly thicker, more durable and less expensive than fine china. Not translucent. Casual china is more accurately, any dinnerware used on a regular basis and may include fine china or bone china patterns as well.

China – A glazed or unglazed vitreous ceramic whiteware used for non-technical purposes such as dinnerware, sanitaryware, and artware. Usually dense in porosity; white in color and opaque. A generic term encompassing all dinnerware but, popularly refers to fine dinnerware. Originated in China.

Crawling - Crawling is where the molten glaze withdraws into 'islands' leaving bare clay patches. The edges of the islands are thickened and smoothly rounded.

Dinnerware – Ceramic whiteware or ceramic glass composition decorated in a given pattern and in a full line of articles comprising a dinner service set.

Earthenware – A glazed or unglazed non-vitreous ceramic whiteware, having absorption of more than 3%, used in the manufacture of dinnerware, clay pottery and giftware. A clayware fired at comparatively low temperature producing a heavy opaque body not as strong or resonant as china. This body is not fully vitrified and must be must be glazed to hold liquids. Earthenware lends itself to a variety of decorative styles.

Fine China – Usually refers to ware made of clay, china stone and silica fired at high temperatures, causing them to fuse into a hard non-porous vitreous body. It is translucent, creamy, off-white or ivory, yet despite it's delicacy it is quite strong. It is fully vitrified and like fine bone china, when glazed, it is fired at a lower temperature so that the color sinks into the clay.



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Glossary of Ceramic Clay Materials: (cont.)

Greenware – Formed ceramic articles that have been removed from the mold but has not been fired.

Hotelware – Heavy dinnerware made specifically for use in hotels or institutions. It is much stronger for chipping resistance and crazing than dinnerware made for the home, but it usually has neither the translucency nor the delicacy.

Ironstone – A much-abused term, ironstone was developed in England and originally contained iron slag. Before the introduction of china in Europe, ironstone was the most popular dinnerware. Today, ironstone is fired briefly at low temperatures and is classified as a low-fired earthenware. It is the least expensive ceramic dinnerware and is often sold in promotional sets.

Jasper – A vitreous, opaque, colored, unglazed stoneware body having white or contrasting decorations and containing a substantial amount of barite. Known for its fine, soft finish, originally developed by Josiah Wedgwood.

Limoges – Porcelain originating from the French town of Limoges, a city known for its ceramics after 1768 when Kaolin (china clay) was found in the soil.

Ovenware - Clayware able to withstand oven heat without damage.

Porcelain – A glazed or unglazed vitreous ceramic whiteware used for technical purposes. This term designates such products as electrical, chemical, mechanical, structural, and thermal ware when they are vitreous. In dinnerware, the generic term for a vitrified, white and translucent material. It normally refers to ware made from a feldspathic body and is thus distinguished from bone china. It is a hard, translucent clayware body usually comprised of kaolin, feldspar and quartz. Kaolin is the base for plasticity, durability and consistency and influences the whiteness of the body; quartz is the base for stability; and feldspar is the base for vitrification. The addition of white bentonite can improve plasticity.

Pottery – A fired clayware produced by a potter (a clay worker). Low-fired porous, colored bodyware, in contrast to white- or buff-colored earthenware.

Semi-Porcelain – One of several terms used to describe a grade of earthenware. No-vitreous, heavier than china. Opaque.

Slip – A mixture of clay and water with a cream-like consistency used both for producing a ceramic body and for ceramic decoration.

Stoneware – A vitreous or semi-vitreous ceramic ware of fine texture made primarily from non-refractory fireclay. The dense clay is fired to 1000-1200 degrees Celsius. Stoneware is not translucent and sometimes takes on buff, grey or brown tones. Generally, stoneware is glazed in earthy tones, giving it a hand-crafted look. Stoneware is fully vitrified and non-porous; even a crack in the glaze will not cause stains. Chip resistant.

Whiteware - Ware having a white or ivory body when fired. The term is generally used for undecorated ceramic ware.