

Clay Selection Guide & General Clay Information

“Which Clay Should I Use?”

There are numerous decisions to make in selecting the right clay - decisions which are usually aided by experimentation and trial-and-error. However, we have a number of charts and additional information that will help you in selecting a clay, which offers the right temperature and color for oxidation or reduction, the right texture amount, (if any, of grog or sand), the right firmness, and the right shrinkage and absorption. Some or all of these factors may be important to you and the project you are creating. If you need additional help in making your decision, call our technical support group at 800-4-LAGUNA or [email us](#).



Low Fire Clay
Characteristics & Traditional Applications



High Fire Stoneware Clay
Characteristics & Traditional Applications



Porcelain
Characteristics & Traditional Applications



Clay Body Characteristics:
Texture, Firmness, Shrinkage & Absorption Explained

Warranties & Responsibilities

Why does Laguna offer more than 200 different stock clay bodies? Better yet, why does Laguna offer over 200 stock clay bodies and still make HUNDREDS of custom clay bodies every year? Because every single use and every single user of clay - from fine china to roofing tile, from fine art to functional pottery, and from studio artists to manufacturer's demands the right clay for every specific project. Our goal is to provide you with that right clay. Your satisfaction with Laguna products is our measure of success.

Low Fire Clays

Characteristics

Low fire clay tends to be either reddish or white in color and because of its porosity, glazing is required to create a waterproof surface. When fired, these clays are non-vitreous and have low shrinkage. Low fire dinnerware does not take extremely hot temperatures well, and repeated exposure to such temperatures can result in cracking and crazing. Laguna's low fire, high talc clays are used commercially, by hobbyists and in educational programs.

Traditional Applications

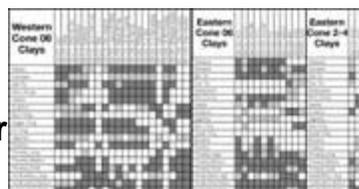
Low Fire Clays provide a good medium for small throwing, handbuilding and modeling projects. Recommended clays include: [EM-207](#), [EM-210](#), [EM-330](#), [EM-338](#), [#10](#), [#20](#). The following basic low fire clays contain sand to facilitate their use on somewhat larger forms: [EM-212](#), [EM-214](#), [#10-G](#), [#20-G](#).

Sculpture Clays are designed for larger projects where varying thickness becomes a factor. Recommended clays: [EM-215](#), [EM-234](#). Cone 06 sculpture bodies include [#10-G](#), [#26](#).

Other low fire clays have specific uses which are usually described in their title, i.e. [06 #5 Pressing](#) and [06 #8 Pressing](#).

Note: Forming methods, drying techniques and firing schedules will all effect your results with any clay. Always test an unfamiliar clay before ordering it in quantity.

Application Charts for Low Fire Clays:



Western Cone 06 Clays **Eastern Cone 06, 2 & 4 Clays**

Western Cone 06 Clays	Clay Types																				
	EM-207 Red	EM-210 White	EM-211 White No Talc	EM-212 Whitesand	EM-214 Buff/sand	EM-215 Terra Cotta Sculp.	EM-217 Wed	EM-234 Red Sculpture	EM-330 Laguna 06 White	EM-334 Wards 06 Red	EM-335 06 #5 Pressing	EM-338 06 Red DE	EM-342 Whiteware	EM-343 R-2 Red	EM-344 R-2 Red w/grog	EM-345 Raku K-white	EM-348 06 #8 Pressing	EM-347 Whiteware w/grog	WC-548 Raku Throwing	WC-549 Raku Industrial	
Artware																					
Overware																					
Wall Tile																					
Wind Chimes																					
Jewelry																					
Sculpture																					
Raku Firing																					
Sagger Firing																					
Pit Firing																					
Jiggering																					
Modeling																					
Throwing Large																					
Throwing Medium																					
Throwing Small																					
Handbuilding Large																					
Handbuilding Medium																					
Handbuilding Small																					

Eastern Cone 06 Clays	Clay Types										Eastern Cone 2-4 Clays			
	EM-100 #10	EM-101 #10-G	EM-102 #10-NV	EM-103 #10-T	EM-104 #10-W	EM-105 #12	EM-106 #20	EM-107 #20-G	EM-109 #26	EM-635 #200		EM-636 #250	EM-110 #100	EM-111 #125
Tableware														
Overware														
Wall Tile														
Floor Tile														
Sanitaryware														
Wind Chimes														
Jewelry														
Sculpture														
Jiggering														
Raku Firing														
Crystal Firing														
Modeling														
Pressing														
Throwing Large														
Throwing Medium														
Throwing Small														
Handbuilding Large														
Handbuilding Medium														
Handbuilding Small														

■ Highly Recommended

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High Fire Clays

Characteristics

Cone 10 Earth-colored Stoneware Clays produce durable ware and most will react favorably to the manipulation of air, gas and smoke in reduction firing. These clays have good plasticity and will perform well in both wheel throwing and hand building methods.

White Stoneware Clays also have good plasticity and contain sand to increase their strength and workability, making them slightly open when fired. These clays have become very popular because of the clean canvas they provide for a myriad of glaze colors. Some iron speckling can occur but for the most part, glaze colors are not affected.

Cone 5 or 6 Stoneware Clays are similar to Cone 10 clays in their workability and represent potential savings in lower firing costs. The lower firing temperature and oxidation atmosphere allow for the use of a large palette of ceramic stains and cause less warping of the ware.

Traditional Applications

Tableware may be made with stoneware clays with smooth to slightly coarse fired surface textures and low water absorption. Recommended clays include Cone 10: [WC-370](#), [WC-841](#), [WC-379](#), [WC-382](#), [#900](#), [#590](#), [#510](#); Cone 5: [WC-877](#), [WC-400](#), [WC-401](#), [WC-402](#), [#50](#), [#55](#), [#65](#).

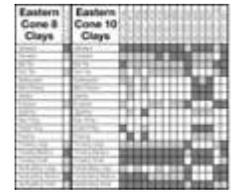
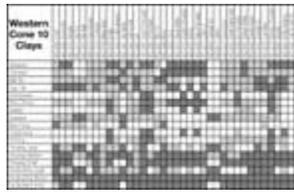
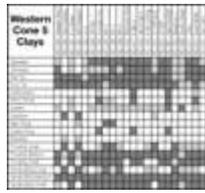
Overware may be made from most stoneware clays provided the ware is well designed and the user is aware of potential thermal shock and how to avoid it. Cone 5 stonewares tend to be less susceptible to thermal shock but all overware made of stoneware should be heated and cooled gradually. Recommended clays include Cone 10: [WC-389](#), [WC-376](#), [#750](#), [#910](#); Cone 5: [WC-851](#), [WC-877](#), [#30](#), [#60](#), [#70](#).

Wall Tile clay selection is completely dependent on one's individual design considerations. Recommended clays include Cone 10: [WC-389](#), [WC-376](#), [#310](#), [#950](#); Cone 5: [WC-397](#), [WC-394](#), [#30](#), [#45](#), [#66](#).

Floor Tile, on the other hand, should be made from a strong, durable clay to withstand wear and abuse. Commercial producers employ special production techniques to increase the durability and provide lower shrinkage. Recommended clays for floor tile include Cone 10: [WC-371](#), [WC-372](#), [WC-381](#), [WC-885](#), [#901](#); Cone 5: [WC-397](#), [WC-365](#), [#30](#), [#45](#), [#60](#).

Sculpture Clays contain significant amounts of sand and grog in various mesh sizes and are formulated for a low rate of shrinkage. These clays are designed to accommodate large handbuilt, wheel thrown or sculpted projects. Recommended clays include [WC-371](#), [WC-372](#), [WC-381](#), [#901](#), [#950](#) which are listed as Cone 10 but may be fired to Cone 5 or lower for sculpture work; [WC-390](#), [WC-392](#), [#30](#), [#45](#), [#66](#), [#75](#) are Cone 5 sculpture bodies, again often fired lower for sculpture.

Application Charts for High Fire Stonewares & Porcelains:



Western Cone 5 Clays Western Cone 10 Clays Eastern Cone 6 Clays Eastern Cone 8 & 10

Western Cone 5 Clays	WC-365 Hawaiian Red 2	WC-390 Red Sculpture	WC-391 B-3 Brown	WC-392 Buff Sculpture	WC-393 LB 6	WC-394 SS Red	WC-395 Porcelain Five	WC-397 WS-5	WC-398 WS-4	WC-399 MR-5	WC-400 Moroccan Sand	WC-401 B-Mix 5	WC-402 Half & Half 5	WC-436 B-Mix 5/Grog	WC-850 52 Buff/sand	WC-851 52 Buff	WC-861 Hagi Porcelain	WC-864 Weststone 2	WC-866 Electric Brown	WC-871 Calico	WC-877 Dover White	WC-881 Red Calico	
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Handbuilding Large																							
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Highly Recommended Recommended

Western Cone 10 Clays	WC-368 S-60	WC-369 Rods Mix	WC-370 Anador	WC-371 Bin Pot	WC-372 Bin Red	WC-373 Dark Brown	WC-376 LB Blend	WC-378 Maya Red	WC-379 B-Mix	WC-380 B-Mix w/sand	WC-381 Bin White	WC-382 Half & Half	WC-383 LW	WC-384 Dawa's Porcelain	WC-385 S Porcelain	WC-387 WS-10	WC-388 WS0	WC-409 CA-2	WC-412 Stonk White	WC-415 English Porcelain	WC-427 HBCA	WC-428 Babu Porcelain	WC-431 LBW-70	WC-809 Soldate 30	WC-811 JSH	WC-823 Rod's Red	WC-835 Death Valley Red	WC-838 Kai Porcelain	WC-841 Danish White	WC-842 Danish sand	WC-843 Soldate 60	WC-872 Los Altos	WC-879 Windsor Porcelain	WC-885 Granite	WC-893 B Mix w/grog	WC-894 Half & Half SC	S-2926 Southern Ice			
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Eastern Cone 6 Clays	WC-401 B Mix 5	WC-600 #005	WC-601 #30	WC-602 #40	WC-603 #45	WC-606 #50	WC-607 #55	WC-608 #60	WC-609 #65	WC-610 #66	WC-611 #70	WC-612 #75	WC-613 #80	WC-614 #90	WC-616 #15	WC-617 #16
Tableware																
Overware																
Wall Tile																
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Eastern Cone 8 Clays	WC-615 #310	Eastern Cone 10 Clays	WC-379 B Mix	WC-618 #510	WC-620 #580	WC-621 #590	WC-625 #700	WC-626 #750	WC-627 #850	WC-628 #900	WC-629 #910	WC-630 #950	WC-631 #550	WC-632 #560	WC-633 #570	WC-637 #1050	WC-643 #901
Tableware		Tableware															
Overware		Overware															
Wall Tile		Wall Tile															
Floor Tile		Floor Tile															
Sanitaryware		Sanitaryware															
Wind Chimes		Wind Chimes															
Jewelry		Jewelry															
Sculpture		Sculpture															
Jiggering		Jiggering															
Raku Firing		Raku Firing															
Crystal Firing		Crystal Firing															
Pressing		Pressing															
Throwing Large		Throwing Large															
Throwing Medium		Throwing Medium															
Throwing Small		Throwing Small															
Handbuilding Large		Handbuilding Large															
Handbuilding Medium		Handbuilding Medium															
Handbuilding Small		Handbuilding Small															

Highly Recommended Recommended

Eastern Cone 6 Clays		Eastern Cone 8 Clays		Eastern Cone 10 Clays		WC-379 B Mix		WC-618 #510		WC-620 #580		WC-621 #590		WC-625 #700		WC-626 #750		WC-627 #850		WC-628 #900		WC-629 #910		WC-630 #950		WC-631 #550		WC-632 #560		WC-633 #570		WC-637 #1050		WC-643 #901		
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Clay Body Characteristics

“Texture: What’s the Difference?”

Texture impacts the feel, the look, and the suitability of a clay for each different project. As a general rule, clays containing coarse sand and grog are generally best for medium to large pottery or sculpture. Smooth clays or porcelains are recommended for smaller, “finer” work; and clays containing fine mesh grog or sand are best for work falling between the other two. As far as “feel” and “look” try a clay sample kit listed in this section. It will allow you to experiment with 6 to 11 clays of similar color and temperature to determine the right texture for your project. Detailed information about the texture for each clay is listed with the clay body descriptions.

“Firmness: How do I Know?”

As with texture, the firmness and consistency of your clay can be important to the success of your project. Because of east vs. west geographic “tradition”, we use different equipment and slightly different standards in measuring and evaluating the firmness of our clays depending on whether they are made in our California facility, our Ohio facility, or our Florida facility. Each Laguna stock clay listed in this catalog is specifically manufactured to the general firmness most popular among our customers. If you like a certain clay, but prefer it harder or softer, custom firmness is always an option. Detailed information for each clay is listed with the clay body descriptions.



The “firmness” of every batch of clay is measured with a penetrometer.

		Relative Firmness Rating			
California (Western) Prepared Clays		Ohio (Eastern) Prepared Clays		Florida (Southeastern) Prepared Clays	
Extra Soft	5.0 - 5.5	Soft	4.25	X	X
Soft	6.0 - 6.5	Medium	5.0	X	X
Medium Soft	6.75	Firm	6.0	X	X
Medium	7.0 - 8.0	Hard	7.5 - 9.0	X	X
Firm	9.0 - 9.5				
Hard	5.5 - 6.5*				

* A small tipped (versus a large tipped) pentrometer is used for measuring this very hard clay - therefore the different scale of measurement.

“Shrinkage & Absorption: What Does it Mean to Me?”

When considering the suitability of your clay for a particular use (coffee mugs, flowerpots, sculpture or decorative wall tiles), shrinkage and absorption are factors which will impact your project. Detailed information about each clay shrinkage and absorption rates are listed with the clay body descriptions.