

What your ocean liner china is and how to care for it

PORCELAIN. BONE CHINA. WHAT'S THE DIFFERENCE?

Well, bone china is actually a type of porcelain, but not all porcelain is bone china.

There are three types of porcelain: hard paste, soft paste, and bone china. Bone china is a type of hard paste porcelain that contains bone ash. (Yes, it's really bone.)

Josiah Spode, of the famous Staffordshire pottery that bears his name, is credited with originating bone china, about 1800. The original formula consists of six parts bone ash, four parts china stone, and three and a half parts china clay.

Today, these ingredients are about half animal bone and one-quarter each china clay and china stone. It is fired twice, the first time in what is called the "biscuit firing" which is between 1200 and 1300 C (2192-2372 F) and the second time in what is known as the "glost firing" which is between 1050 and 1100 C (1922-2012 F).

Although we usually think of bone china as being the "special" pieces of our collections, and the ones we protect most carefully, bone china is actually stronger than some other types of porcelain and does not chip as easily. Of course, it is also whiter and brighter than other types of porcelain. One distinctive characteristic of bone china is that light will pass through it. (Compare Foley China and Maddock Ware, both used on Cunard Line. The Foley is lighter in color and weight and light does,

indeed, pass through it. The Maddock, on the other hand, is much heavier and is certainly opaque. Foley is bone china porcelain, while Maddock is stoneware, made from just one type of clay.)

Bone china's strength comes from the melding of the various ingredients during firing. By the way, china is called "china" because *procelaneous* ware was first made there. Chinese porcelain is softer than European or English china.

The bone used in bone china is calcined bone ash, and makes up about half of the weight of the finished piece. It is produced from animal bone, which has been processed to remove any remaining meat or other elements. It is then heated to 1000 C (1832 F) to remove any residue, sterilize it, and make it suitable for use in the bone china recipe. The bone is then finely ground with water.

Caring for your bone china

Bone china may be more durable than other types of porcelain, but it's still breakable. And, besides, it's often among the finest pieces in anyone's collection. Therefore, it deserves good care.



TWO PORCELAIN CUPS—Both cups are porcelain and both are called “china.” But only the cup on the right is bone china. It was manufactured by Foley for use on board the Queen Elizabeth and Queen Mary of Cunard Line. Being bone china, it contains approximately 25% calcinated animal bone (animal bone that has been heated to a point that it can be easily ground). China in this style was used for cabin service and afternoon tea service on board the Queen Mary and Queen Elizabeth. The cup measures 2¹/₂ inches tall and the diameter is 3 inches at the mouth. The saucer measures 5³/₄ inches in diameter. Excellent condition. **\$325.00.**)

The cup and saucer on the left are frequently called “china,” but are actually a form of earthenware. Its body (the mixture of ingredients used to make them) does not have the bone content of bone china, if any, and the pieces are much heavier, and therefore not translucent. This Maddock Ware cup measures 2¹/₂ inches tall and has a diameter of 3³/₄ inches at the mouth. The accompanying saucer measures 6 inches in diameter. Excellent condition. **\$275.00.**

Here are some guidelines for caring for your bone china:

- Never use it for cooking and do not expose it to direct flame or a sudden change in temperature. For example, a heated plate should not be exposed to cold water.
- While bone china can be used in a microwave oven, objects with gold patterns or even elaborate patterns should not be exposed to microwave. The microwaves can bounce off the metal paints used in the patterns causing potentially dangerous arcing and the designs can become pitted. (And there may have been metals that were included in the porcelain mix, either incidentally or on purpose, that are not necessarily visible and which may be affected by microwaves.)
- Bone china can be washed in a dishwasher, but

you should use detergents that are specially formulated for fine table ware. Do not exceed 1400 F water temperature. Be sure to use a rinse aid.

- When hand washing china, avoid anything that might scratch the surface. Let bone china soak in water and mild detergent to dislodge any dried on residue.

Most of the time the only washing needed for collectors’ china is to remove any accumulated environmental dirt and debris, such as exhaust residues. And some collectors simply give a spray of window cleaner and wipe with a paper towel. There are problems with this approach. First, the window cleaner is likely off-the-supermarket-shelf liquid with ammonia. Ammonia is harsh stuff, even in the small quantities found in most bottled window cleaners. Also, most window cleaners contain alco-

hol—that’s what helps keep them from streaking. They also contain dyes (you didn’t think they were naturally blue, did you?).

The best approach is to prepare two spray bottles (spend the few dollars and buy brand new, unused spray bottles at the hardware store so you know you’re not inadvertently introducing any kind of solvent or other problematic substances when you clean.) In one bottle, mix together one part natural detergent—not the kind you get in the household cleaner section of the grocery store. Use a vegetable based detergent if you can find it and make sure it contains no petroleum distillates. Add 10 parts distilled water. *Do not* shake this up. Fill the other bottle with just distilled water. Then get two clean cotton cloths.

To clean the grime off your china, use just one squirt from the detergent bottle and wipe gently with one of the cloths. Then use one or two squirts of the plain distilled water to rinse off any of the detergent solution that might remain. Use the other cotton cloth to dry the piece.

Of course, most collectors will not actually use their vintage table wares, or at least won’t treat them as everyday dishes. But these guidelines are useful nonetheless.

- Some experts advise storing your bone china cups sitting upside down. Avoid stacking them and do not hang them on hooks because either of these can weaken the handles. But some manufacturers say that the rims are the most delicate parts of their cups. Therefore, you may want to simply set them right side up, depending on the results of a visual inspection of the strength of the rim.

- Store your bone china plates with tissues or some other type of acid-free paper between each to avoid scratches.

- Never, ever, use spring-type plate hangers that allow frameless display of plates on walls. These put undue pressure all the way around the plate and if they don’t cause cracking, they can at the very least hasten crazing (fissures) in the glaze. Also, some commemorative plates have small holes pur-

posely formed in the underside ridge of the plate, specifically for attaching a string or wire for hanging on a wall. We advise against using this feature, even though it was built into the plate, because the weight of the plate itself against the string or wire will naturally cause stress. Again, even if the stress does not cause cracking, it might hasten crazing.

To display a vintage plate, either set it flat on a solid surface (where pets or other natural or unnatural dangers are not likely to get to it) or get a small easel to hold it upright. Use felt or some soft material to cushion the contact points at the bottom of the plate and the easel. This will avoid stress on the plate.

Old china frequently has stains, either from use or simply discoloration from age. These can sometimes be removed, but great care is necessary. Do not use cleanser, bleach, or any household cleaner.

First try the general cleaning method described above with the vegetable-based detergent

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and distilled water in spray bottles. This probably won’t take out any stains, but you might be surprised.

If that doesn’t work, the next approach is to try baking soda. Mix a paste of baking soda and dis-

tilled water that will adhere to the object being cleaned, about a two-part baking soda/one-part water mix should work. Use a cotton tipped swab to apply the mixture to the stain and let stand for several minutes. It is safe to gently rub the mixture into the stain using the swab. But we emphasize *gently*. Don’t rub too hard (in fact, do it without much pressure at all, but only to move the baking soda paste around on the stain). Rinse the object with distilled water. Repeat until you get some result or decide this isn’t a strong enough approach.

If the baking soda mixture doesn’t work, you may want to move to a somewhat stronger approach. Mix a solution of one-part 3% hydrogen peroxide solution with 10 parts distilled water. (Note: add the peroxide to the water; do not add the water to the peroxide because it will cause a chemical reaction and could splash. Peroxide, espe-



BIRD OF PARADISE PATTERN FROM FURNESS BERMUDA LINE—These pieces of china are from Furness Bermuda Line and feature colorful bird and pastel floral designs on bright white china. It is the bone content of this china that gives it the white appearance. Patterns are either painted or applied by decal onto the biscuit, which is china before it is glazed and fired.

The teapot measures 3¹/₄ inches from top to bottom, 5¹/₂ inches from tip of the spout to end of the handle, and the mouth of the pot is 2 inches in diameter. It is in very good condition.

The demitasse measures 2 inches tall with a diameter of 2¹/₈ inches. The saucers are 4 inches in diameter. The demitasse has a chip on its lower lip and, thus, is in fair condition, while its saucer is in very good condition. The lone, or spare, saucer is in excellent condition. The creamer measures 3⁵/₈ inches tall, 2 inches in diameter, and is in excellent condition.

Teapot **\$365.00.**

Creamer **\$115.00.**

Demitasse and saucer **\$155.00.**

Saucer **\$56.50.**

cially at these dilutions is not particularly hazardous, but you don't want to inadvertently get any of it on your collectibles where you don't intend it to be.

This is simply being prudent.) Use a cotton-tipped swab to carefully apply a small amount of the diluted peroxide solution to the stain. Leave it on for no more

than 30 seconds. The stain will almost certainly not be gone, though. Rinse the area with distilled water and repeat. Continue doing this until you see results or

decide this isn't a strong enough approach. You may try increasing the amount of peroxide in the solution if you aren't getting results from the milder dilution. Be careful, however; peroxide is a bleach. Even some museums, though, use a 20% hydrogen peroxide solution to try to remove stains, especially rust, from their porcelain artifacts. One highly regarded museum's conservation department advocated boiling an item in hydrogen peroxide to remove a stain.

We prefer a *very* conservative approach, however. (And, of

course, there is the story of the person who advised someone to soak a piece of Foley china in bleach to remove a stain. It worked, we're told. Both the stain and all the decoration were thoroughly removed from the piece after soaking overnight.)

You'll notice, too, that we advise using distilled water. There's a good reason for this. Tap water, bottled water, even softened water, contain iron, even if it's in small amounts. Distilled water has no minerals. Iron is one of the leading causes of staining on porcelain and china.

So even if you succeed in removing a stain from an object, but use regular water to rinse it, small amounts of the iron may remain on the piece and show up as a new stain some time later.

The same is true of bleach and household cleaners: they may leave residues, even if you think you have thoroughly rinsed and removed them, that may not have an immediate effect, but which will cause chemical reactions over time and damage or at least mark the artifact.

Bone china is probably more durable than you thought, and given the right care it can last for generations. And it's a very nice thing to be able to pass down through a family a full set of bone china.



MADDOCK BOWLS—Here are two great examples of Maddock Ivory Ware bowls. One is a cereal or soup bowl with deeper sides. It measures 7¹/₂ inches in diameter and is 1¹/₄ deep. The other is a smaller fruit bowl without the internal rim. Its diameter is 6¹/₄ inches and it is 1¹/₂ inches deep. Both are in very good condition.

Soup bowl \$180.00.

Fruit bowl \$150.00.