

## Sink cabinets, chemical storage, and caulking and grouting

### Sink cabinets and chemical storage

Think about what's typically located in your sink cabinets: the underside of metal sinks, garbage disposals with metal casings, copper water supply pipes, and plastic or metal drainage pipes. Both plastic and metal are affected by corrosive chemicals, and continued corrosion and rusting can eventually result in leaks. Unfortunately, most people store household cleaning products and supplies in the sink cabinets (see **Error! Reference source not found.**) without realizing the possible consequences of doing so. Sink cabinets are absolutely the wrong place to store cleaning chemicals because, by their very nature, they are corrosive, so do not store chemicals in them!

Additionally, children won't be able to gain access to harmful and dangerous chemicals if they are not in those low sink cabinets. And no one ever takes all those chemicals out of the sink cabinets to inspect the cabinet floor and the water and drainage pipes—unless they're moving, a significant leak is noticed, or a young child is in the hospital after gaining access to the chemicals. Regardless of what you store in your sink cabinets, remember to childproof your cabinets and drawers.

Water supply lines and drain pipes should be checked regularly. Here's how to do it on a daily basis with little effort on your part: Store dry materials (towels, bathroom tissue, boxes, etc.) in sink cabinets (see **Figure 2**). If normally dry materials are wet when you remove them, you know you've got a leak of some type somewhere, so check for leaks in the water pipes or drain pipes, and check for deteriorated caulking/grouting around the sink and countertop. Have a licensed plumber repair or replace any plumbing components, and have the deteriorated caulking/grouting repaired.

So where should you store common household cleaning chemicals? A cabinet out of the reach of young children in the garage or at an exterior location is great, but if you must keep them inside, an upper hallway closet, the cabinet above the microwave oven, or the cabinet above the refrigerator make good interior locations. If it means that you have to go buy a step ladder to get the chemicals each time you need them, I think that small inconvenience is far better than the inconvenience of going to a funeral for a dead child or visiting an injured child in the hospital for several days. I hope you agree.

Regardless of where you store the chemicals, make sure the cover is tightly closed and secured so that it doesn't spill if you accidentally knock it over or drop it. If you do have to keep chemicals in lower cabinets or drawers—and you shouldn't—make sure those cabinets and drawers have child-proof latches on them.





Figure 1. Poor storage of chemicals in sink cabinet.



Figure 2. Good storage of dry goods in sink cabinet.



Figure 3. Flexible accordion drain pipe.

## Drain pipes

Dissimilar materials are sometimes used for drain pipes at the sinks (e.g., brass, chrome, copper, and/or plastic connecting to each other). While common, the condition does create a maintenance concern simply because different materials expand and contract at different rates when exposed to hot and cold water, causing loose connections with age and use. It is those loose connections which result in leaks, which can cause major property damage if not detected immediately. Dissimilar materials also cause corrosion. Look at the water supply pipes and/or drain pipes in just about any sink cabinet, and you'll see corrosion. Usually it indicates a dissimilar material connection. However, if you allow it to continue, it can result in leaks. Most sink cabinets at the time of the inspection look like the sink cabinet in **Error! Reference source not found.**, so it's difficult for me to see everything that I want to see. Consequently, when you move in, check you're the water supply lines and drain lines in the sink cabinet before you start storing items in there. If you see a lot of corrosion, clean it off and check for leaks; have any leaks repaired. Then schedule a day each month when you remove everything in the sink cabinets and look at those water supply lines and drain pipes. If you see corrosion, clean it off and check for leaks. Continue on a regular basis and you'll be able to prevent most water problems and mold growth.

Flexible accordion drain pipes (see Figure 3) are not rigid enough to resist damage on a daily basis in sink cabinet areas and should not be used on a permanent basis. Various home improvement stores recommend having standard rigid tailpipe installed to help prevent leaks and water damage.

## Caulking and grouting

Caulking and grouting is typically found in the kitchen, bathrooms, and laundry area at connections between the toilet and floor; the bathtub, floor, and wall; the shower, floor, and wall; and the sink and countertop. Damaged, deteriorated, or cracked caulking or grouting can allow moisture to penetrate into the structural framing, causing water damage or promoting mold growth. It is impossible to tell how long deteriorated grouting or caulking has existed, and moisture might have penetrated structural framing and caused damage which is not visible and can only be detected by remodeling/renovation or destructive testing. Of course, I don't do destructive testing on someone else's property. Before deteriorated grouting or caulking is repaired, the substructure should be examined for evidence of structural damage, deterioration, and mold.

Recaulking and regrouting is a common homeowner maintenance practice. While recaulking and regrouting normally is not a cause for concern in and of itself, and homeowner maintenance should be applauded, in today's world of [mold](#) disclosure and mold claims, you should understand that I have no knowledge of the time of, and reason for, the recaulking or regrouting. You should also understand that moisture penetration into the structural framing might have occurred, possibly causing structural damage or promoting mold growth. Remodeling or removing shower and/or bathtub sections, flooring, wallpaper, wall mirrors, etc., could reveal moisture damage or structural damage that was concealed at the time of the inspection; concealed defects are not within the scope of the home inspection. Also note that some household chemicals can cause damage or

deterioration to some types of caulking and grout. So make sure you read the instructions on the chemical containers before using them.

### **Damaged or loose tiles**

Damaged and loose tiles create the same type of problems as deteriorated caulking and grouting. Any moisture penetrating behind the tiles can cause moisture damage and mold growth within the wall cavity. A definitive assessment might require destructive or invasive testing, which is not within the scope of the home inspection. Large cracks in tiles, lots of cracked tiles, or lots of loose tiles could be signs of more serious structural and moisture problems in the area. And of course, any repairs should be done by qualified professionals. Home owner repairs such as that shown in Figure 4 ultimately will result in complete failure of the wall such as that shown in Figure 5.



Figure 4. Improper tile and grouting repair.



Figure 5. Total collapse of the shower wall.

### **Drain pans**

Considering the amount of damage that water can cause in as little as 24 hours, or less, I recommend putting a shallow tub or drain pan in all of your sink cabinets, particularly the kitchen sink cabinet. Then you can store stuff in the shallow tub or drain pan. If there is a small leak that you don't notice for a couple of days, the water will accumulate in the shallow tub or drain pan, thereby preventing water damage to the flooring and walls of your sink cabinets. When the shallow tub or drain pan fills with water, there's a good chance that you'll notice it while the leak is still a small leak and before it damages anything.

### **Renovation**

If you are planning any renovation, I recommend adding a contingency amount (I personally use 20% of my estimated expenses) into your budget to cover unforeseen problems.

### **Recommendations**

- Ü Recommend storing chemicals in upper cabinets, in locked cabinets, and/or in exterior cabinets.
- Ü Recommend childproofing all lower cabinets and drawers.
- Ü Recommend storing dry materials such as towels, boxes, and tissue in sink cabinets to facilitate daily monitoring of the water supply lines and drain pipes.
- Ü Recommend daily homeowner monitoring and maintenance.