

Steam Master Cleaning & Restoration



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Understanding Urine Damage

Pet urine can cause permanent damage to your floors and fabrics. It can also create an unhealthy indoor environment. When urine is first deposited onto a floor or fabric, it has a pH of about 5 or 6, which is on the acid side of the pH Scale. It is easier to remove right then when it is fresh. Once it dries it turns "alkaline" or to a high pH between 10 to 12 on the scale and becomes more difficult to remove. The warm acid state of the urine offers a perfect breeding ground for bacteria, which begin to flourish almost immediately. In this original acid state the urine begins to oxidize and react with the carpet to create a color change, which will become permanent if the urine is not removed

immediately. Some of this color change can be attributed to the strong ammonia that forms as the urine passes through bacterial and chemical change. If left for days or weeks, depending on the fabric or floor type, it will change the dye structure, therefore causing permanent staining. Even if the soluble deposits are removed, the damage to the dye structure may already be done.

There are two sources of odors associated with urine. The first comes from bacteria that grow abundantly in dark warm places with a never-ending food source. A pet can



feed the bacteria daily! This bacteria growth and breakdown of the urine creates amino acids. These complex organic compounds will often work deep into the fibers to a point of becoming part of the fiber. This can present a challenging situation. The waste materials and gases from the decomposing urine create an unpleasant odor. When dried urine is remoistened, it gives off an ammonia gas. If smelled once it is seldom forgotten.

The second source of odor is chemical odor that is present even when the bacteria have been killed. This explains the reason that more than sanitizing is necessary to neutralize odors from urine. Urine also presents additional odor problems when the relative humidity is high. The salts and crystals that are left behind as the urine dries are hydrophilic and draw water to them. Dried urine is often easy to smell in the humid months because the salts attract the moisture, the moisture evaporates putting out a greater proportion of odorous ammonia gas. You must get rid of the urine salts in and under the carpet to get rid of the odor. That's why cleaning existing urine spots WILL NOT remove any associated odor. In fact, it could INCREASE the odor in the air space for a temporary period of time.

Try to stay away from products with high pH such as ammonia, Resolve and oxygen bleaches. These products will leave the carpet with a residue and in a high pH state, which will enable the carpet to attract dirt like a magnet. In some instances the use of the wrong product can cause the urine stain to be permanent. Please call Steam Master Cleaning & Restoration first if you are not sure about a product you may want to try.