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Are duct materials other than bare sheet metal ducts more likely to be contaminated with mold and other biological contaminants?

You may be familiar with air ducts that are constructed of sheet metal. However, many modern residential air duct systems are constructed of fiber glass duct board or sheet metal ducts that are lined on the inside with fiber glass duct liner. Since the early 1970's, a significant increase in the use of flexible duct, which generally is internally lined with plastic or some other type of material, has occurred. The use of insulated duct material has increased due to improved temperature control, energy conservation, and reduced condensation. Internal insulation provides better acoustical (noise) control. Flexible duct is very low cost. These products are engineered specifically for use in ducts or as ducts themselves, and are tested in accordance with standards established by Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), and the National Fire Protection Association (NFPA). Many insulated duct systems have operated for years without supporting significant mold growth. Keeping them reasonably clean and dry is generally adequate. However, there is substantial debate about whether porous insulation materials (e.g., fiber glass) are more prone to microbial contamination than bare sheet metal ducts. If enough dirt and moisture are permitted to enter the duct system, there may be no significant difference in the rate or extent of microbial growth in internally lined or bare sheet metal ducts. However, treatment of mold contamination on bare sheet metal is much easier. Cleaning and treatment with an EPA-registered biocide are possible. Once fiberglass duct liner is contaminated with mold, cleaning is not sufficient to prevent re-growth and there are no EPA-registered biocides for the treatment of porous duct materials. EPA, NADCA, and NAIMA all recommend the replacement of wet or moldy fiber glass duct material.

Experts do agree that moisture should not be present in ducts and if moisture and dirt are present, the potential exists for biological contaminants to grow and be distributed

throughout the home. Controlling moisture is the most effective way to prevent biological growth in all types of air ducts.

Correct any water leaks or standing water.

- ❑ Remove standing water under cooling coils of air handling units by making sure that drain pans slope toward the drain.
- ❑ If humidifiers are used, they must be properly maintained.
- ❑ Air handling units should be constructed so that maintenance personnel have easy, direct access to heat exchange components and drain pans for proper cleaning and maintenance.
- ❑ Fiber glass, or any other insulation material that is wet or visibly moldy (or if an unacceptable odor is present) should be removed and replaced by a qualified heating and cooling system contractor.
- ❑ Steam cleaning and other methods involving moisture should not be used on any kind of duct work.