

Air Handling Systems

by Manufacturers Service Co., Inc.

Can PVC Ducting be properly grounded

Question was forward to Air Handling Systems by Furniture Wood Digest.
Answered by Curt Corum, Technical Sales Manager of Air Handling Systems

Question: How does one go about grounding a (PVC) plastic pipe system?"

Answer: I am not sure your typical plastic pipe system conveying dust can be adequately grounded. As we know, the reason for people attempting to ground plastic pipe is because of the generation of static electricity. Static electricity develops when the dust particles constantly rub the plastic surface. A substantial electrical accumulation may result, which then begins to discharge into fine dust particles. It is likely an explosion will occur at some time under this condition. Interior and exterior grounding has to be considered. If a grounding method was available for this situation, I am sure it would be quite extensive and expensive.

Plastic pipe systems are not designed for dust collection use. A necessary diversity of fittings to meet design requirement does not exist. Also, plastic pipe elbows have a very short radius and plastic tee fittings are improper for dust removal. It is these types of problems that lead to an inefficient dust collection system.

My suggestion would be to convert over to a metal piping system. With a metal dust collection piping system you do not have the concern of static electrically developing. Elbows and other various fittings are properly designed for conveying dust. The diversity of fittings and accessories will enable you to meet design requirements. Inevitably, you will get the best performance from your dust collector.