

This is Green Air

Presented by NASPR

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As Joe Friday used to
say —

“The facts mam, just
the facts”

Since we have started representing FLAMEBAR BW11 we have encountered many instances where people have been unaware of some of the aspects of fire rated ducts and their applications. We offer the information here to clear up some of these issues. If you have questions regarding an application please contact us.

There are a number of reasons that we utilize fire rated duct systems or fire rated shafts.

One of these is to keep fire out of a duct or chase. This would be to prevent fire from spreading from one compartment, through the duct or chase, to another compartment. Situations such as stair pressurization, toilet exhaust and domestic kitchen exhaust would be in this category. The duct or chase must be constructed so that the fire can not penetrate and migrate.

Another situation would be to keep a fire contained within the duct or chase so that the fire within would not spread to other areas. Examples of this would be dryer exhaust, garage exhaust, fume hood exhaust, electrical room supply and exhaust, ducts passing through egress corridors, etc.

Underwriters Laboratories has recognized these two different applications. When testing duct systems that are designed to keep fire out they are designated as Type A duct (fire outside the duct). Duct systems that are designed to keep fire in are designated Type B duct (fire inside the duct).

ALL duct wrap systems are UL classified for Type A duct systems only. There is no UL classified system that utilizes a wrap to contain a fire within the duct. Of all the UL classified fire rated duct systems the only product listed for Type B duct is Firespray FLAMEBAR BW11.

Of all the classified type A duct the only product with stability and integrity ratings over 2 hours is once again Firespray FLAMEBAR BW11.

What does all this mean?

If the intent is to have a UL classified system that is dealing with a Type B (fire inside) duct there are only two options. One is to utilize FLAMEBAR BW11 while the other option is to build a fire rated shaft or chase and totally enclose the duct. Wraps are NOT an option. Just as important as the proper application, it is also imperative to understand the construction standards that are associated with each product. All of the UL classified wraps clearly state that they must be installed on a minimum of 22 (one is 26 minimum but only gives a 1 hour rating) gauge steel (3M says their minimum is 20 gauge). It is also stated within each classification document that the duct must be hung with threaded rod (minimum 3/8" to 1/2") and with angle iron ranging from 1.5" x 1.5" to 3" x 3". Straps will not work.

So, if wrap is to be utilized on Type A duct the duct **MUST** be constructed of steel, be of the proper gauge, and hung with the proper hangers at the specified spacing.

With Firespray's FLAMEBAR BW11 we not only provide all the information so that the SYSTEM is installed correctly we also inspect the installation and issue a certificate of conformity so all interested parties can be assured the system is per the UL classification.

Duct for commercial kitchens is a special case. It needs to be designed to contain a fire within the duct and be able to keep a fire outside of the duct from igniting anything within the duct. We will address this issue in regard to FLAMEBAR at a later date.