

## VENTILATION REQUIREMENTS FOR REENTRY OF SPACES AFTER SPRAYING OPEN CELL SPRAY FOAMS

When the application of an NCFI open cell spray foam insulation is completed on the interior of a building, other personnel should remain away from the area until the foam has cured and the air ventilated to diffuse any airborne contaminants. The use of fans/blowers is recommended to continually move the air through and out of the building.

The ventilation requirements are:

Reentry = 4 hour @ minimum 20 ACH

Reoccupancy = 24 hours (Regardless of the ACH)

Detailed Guidance for setting up the ventilation during and after a spray foam application is provide in the Spray Foam Coalition document

“Ventilation Considerations for Spray Polyurethane Foam” which is included in the NCFI Product Stewardship Manual (PSM). SPF Contractors should refer to this guidance prior to beginning any spray foam application project.

### **Calculating Air Changes per Hour (ACH)**

Measure the room floor length and width and wall height in feet.

Multiple the length x width x height to calculate the Cubic Feet of air space.

Example: a office room is 30ft x 20ft and 10ft high.  $20 \times 20 \times 10 = 6,000$  cubic feet of air space.

You have to know the air flow rating of the ventilation fan or blower to be used.

**Example:** The shop fan you have is rated to blow 2000 cubic feet per minute (CFM).

So the fan placed into the room blowing air out of the space would complete an Air Change in 3 minutes.

Therefore in 1 hour, the space would have 20 Air Changes which complies with the minimum requirement of 20 ACH for 4 hour.

If the shop fan available is rated at 1000 CFM, it would take 6 minutes to complete the Air Change, so only 10 ACH, which is not compliant with the required 20 ACH. This would not be acceptable and a larger fan would be required.



**Question:** If the blower can complete the 20 air changes in two hours, can the reentry time be shortened to 2 hours?

**Answer:** No, the foam curing and stabilization requires the four hour time even with a greater ventilation air flow.

The reentry must have both 4 hour delay and a minimum of 20 Air Changes.

**Reentry** – the time elapsed after installation of SPF in a building when it is deemed safe for applicators, helpers and other trade workers to enter the building and resume operations without the need for PPE.

**Reoccupancy** - the time elapsed after installation of SPF insulation in a building when it is deemed safe for building occupants or residents to resume normal building operations and activities.