

TOOLBOX TALKS

The Upside of Safety



ROOFING FIRE: DEADLY CONSEQUENCES



Investigators with the Chicago Fire Department say vapors built up inside the garage's elevator penthouse may have been ignited by an open flame, causing the fire that killed 47-year-old roofer and injured four others on Saturday afternoon.

Investigators say adhesives or similar materials were being used and they are trying to determine whether the work the roofers were doing required outside ventilation.

WHY DID THIS HAPPEN?

- Most adhesives used in roofing are made with flammable liquid solvents such as acetone or toluene.
- When used, these solvents flash off (we call it drying). The "flash point" is the temperature that this happens. This is usually below freezing so **EVERY TIME WE USE ADHESIVES, WE CREATE A POTENTIALLY FLAMMABLE ENVIRONMENT!**
- If the flammable vapors accumulate in a great enough concentration, they can be ignited. This is call "Lower Explosive Limit" (LEL).
- This is especially hazardous when used inside or outside when there is no natural ventilation, i.e. wind!
- If there is an ignition source (sparking tool, gasoline engine, smoking, static spark, etc.) in the presence of the vapor accumulation, a fire will result.



HOW CAN THIS BE PREVENTED?

- Apply adhesives **ONLY WITH ADEQUATE VENTILATION**. Make sure there is a breeze blowing to remove vapors. If used inside or in areas without wind, use a fan to blow in clean air and dilute the flammable vapors.
- Control ignition sources. **NO SMOKING, TOOL USE, GENERATORS OR COMPRESSORS IN THE AREA.**
- Limit the amount of adhesive in the area being worked on.
- Make sure you have at least 2 fire extinguishers (min 4A60BC size) nearby and know how to use them.

