

# Loss Prevention Safety Tip



Loss Prevention  
Program

By Red River Mutual

## POLYURETHANE FOAM INSULATION SAFETY

**Toxic gas, severe high temperatures and thick black smoke make polyurethane foam insulation a dangerous fire hazard.**

Polyurethane foam insulation is a superior insulator with high R-Value. It is inexpensive and easy to install, however, it is a severe fire risk and requires a thermal barrier to make it safe.

When polyurethane foam insulation burns it gives off toxic gasses, very high temperatures and large amounts of thick, black smoke. Such a fire makes it difficult to evacuate and poses problems in fire fighting efforts. Once a polyurethane fire is started, it usually results in a total loss of the property.

Identifying polyurethane foam insulation is easy with its sponge-like appearance. The insulation is formed when chemicals are mixed together that expand, causing small cellular air pockets similar in appearance to a sponge. The polyurethane is often orange, yellow, beige or purple in colour.

Because of the inherent dangers, polyurethane foam must be protected. Protection is achieved by applying thermal barriers over the foam. Thermal barriers include gypsum board, plaster or masonry as well as ULC listed spray on thermal barriers. The contractor that installs the foam can also install approved thermal barriers in the correct configuration.

The building code calls for exposed polyurethane to be protected with a ULC listed, 15-minute thermal barrier in all buildings where there is a life safety concern or processing hazard (activities that produce heat, flame or sparks). This protection must stay in place during the early stages of a fire and prevent an increase in temperature behind the barrier of over 250°F. Some jurisdictions require a greater than 15 minute listing. Local by-laws should be checked before proceeding with the protection.



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