Mixing, Heating Flammable Solvents Risky

If your workers mix and heat flammable solvents in open tanks, make sure they follow proper safeguards.

That’s the advice of the US Chemical Safety Board (CSB) as it investigates a fatal explosion and fire that killed one person and injured five others at Universal Form Clamp Company in Bellwood, IL, on June 14, 2006.

The incident occurred while workers were heating and mixing flammable solvents in an open tank. There were approximately 11,000 pounds (5,000 kg) of heptane and mineral spirits in the tank. (Heptane is a highly flammable and volatile liquid that is a component of gasoline.)

During the heating process there was a sudden release of vapors from the tank. These vapors ignited and caused an explosion, which in turn ignited other chemicals stored nearby.

The fatally injured worker was a delivery driver who was not employed by the company, according to the CSB.

John Bresland, a board member of the CSB, said the board is “concerned about the practice of mixing and heating flammable liquids in open tanks without appropriate safeguards.”

Bresland said the investigation will examine facility procedures as well as the adequacy of fire codes, standards and local permitting and enforcement.