

Tool Talk Safety Meeting

Date – April 13, 2020

Topics – **Grounding and Bonding Containers**

This is the time of year where transferring liquids (Toluene) from containers into tanks or pails is performed more often increasing the risk of fire or explosion caused by static electricity. The intent of this Tool Talk is to reduce or eliminate the risk of fire and explosion caused by static electricity when transferring flammable liquids from one container to another.

What is the likelihood of a static electric spark causing a fire? Like anything, as exposure increases the probability of an event occurring increases. Over time, after repeated exposure, the event will happen if proper precautions are not taken to eliminate the risk. On March 29, 2011, a fire caused by static electricity occurred in Building D in Troy. A spark generated by static electricity ignited Toluene while being transferred through a hand pump from a drum of Toluene to a 5 gallon metal pail. The metal drum and pail were not properly grounded and bonded. To prevent static electric sparks, containers must be grounded and bonded.

Grounding

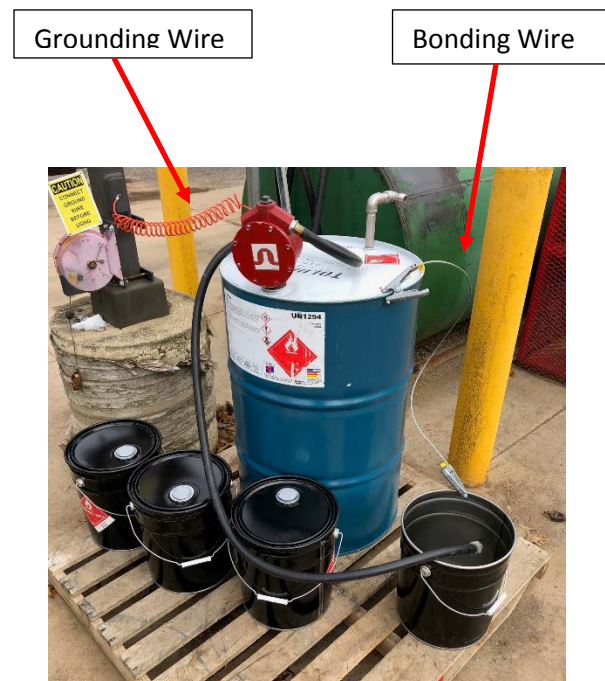
Grounding is accomplished by attaching a wire between a container (55 gallon drum of Toluene) and a grounding rod or other properly grounded source. The grounding wire balances the static electric charge between the container and the earth creating a conductive path to the ground eliminating the chance of static electric spark.

Bonding

Bonding is accomplished by connecting a wire between the grounded container and a second container (5 gallon pail). Connecting a second container to a grounded container equalizes the electrical charge between the two objects providing a conductive path to the ground eliminating the likelihood of a spark.

Safety Practice

Containers are to be properly grounded and bonded when transferring flammable materials.



Questions about Tool Talk Topics or other safety items? Contact Kurt Shea at 269-207-2055 or by email at kurt@pkcontracting.com