

Toolbox Talks

Weekly Tailgate Topic_

12-37

Discuss with crews on _____ [INSERT DATE]

Safety around Degreasing Solvents

In the industrial world, grease is used in a wide variety of applications. Sometimes it is necessary to get rid of grease, particularly in equipment maintenance. There are hundreds of different solvents that can do the job, and many of these have varying degrees of danger to the human body...

Benzene was widely used as a degreasing agent until it was discovered that it directly causes leukemia. Other degreasing solvents are a danger to the environment. Carbon tetrachloride was used widely as a cleaning solvent until it was found to be ozone-depleting and a greenhouse gas. It, too, is hazardous to humans. The most dangerous of these solvents have been removed from the workplace (benzene, carbon disulfide, trichloroethylene, etc.), but there are plenty with moderate degrees of exposure hazard that are still used!

There are two main routes that solvents take to get into the body; **inhalation** and **dermal absorption** (through skin contact).

- **Inhalation:** Respiratory protection is necessary with many solvents, especially if you are working with them for long periods of time. Make sure that your mask cartridge uses activated charcoal or some other adsorbent. **Dust masks will do absolutely nothing except provide a false sense of security.**
- **Dermal absorption:** The skin is excellent at protecting you from polar compounds (water soluble). However, non-polar compounds, like solvents, can slip right past your skin barrier. You may not feel it, but you can absorb dangerous levels of chemicals simply by touching them. Gloves, creams and other skin barriers are designed to protect you when your skin cannot. However, make sure you are using the right glove. For example, nitrile gloves are excellent for handling caustic soda, but terrible for handling acetone. **Do not assume that one glove is good for all solvents.** Remember eye protection as well. Depending on the solvent, a splash of chemical could mean severe irritation or even blindness.

Questions to Generate Discussion

- Who is the best person in your workplace to ask about health hazards of specific degreasing solvents?

In degreasing a wheel bearing, you tip the solvent bottle and it spills on your pant leg. Discuss the best plan of action.