TOOLBOX TALK #7

SELECTING THE APPROPRIATE CHEMICAL-RESISTANT GLOVE

When handling chemicals, it is important that workers protect their hands. OSHA recommends asking the following questions to help determine what type of glove a worker may need:

- What types of chemicals are being handled?
- What is the nature of contact? Is it total immersion or only splashes?
- What is the duration of contact?
- Is it just the hand that needs protecting, or the forearm and arm as well?
- What kind of grip do you need?

Once you determine the hazards, it is time to select the proper glove. According to OSHA, chemical-resistant gloves are made with different kinds of rubber: natural, butyl, neoprene, nitrile and fluorocarbon (viton); or different types of plastic: polyvinyl chloride, polyvinyl alcohol and polyethylene. These materials can be blended or laminated for better performance. OSHA notes that the thicker the glove material, the greater the chemical resistance. However, thick gloves may impair grip and dexterity. Common chemical-resistant gloves include:

- **Butyl gloves** are made of a synthetic rubber and protect against many chemicals, such as peroxide, some fuels, highly corrosive acids and strong bases. These gloves also resist oxidation and abrasion, and stay flexible in low temperatures.

- **Natural (latex) rubber gloves** are comfortable and feature outstanding tensile strength, elasticity, and temperature resistance. In addition to resisting abrasions from grinding and polishing, these gloves protect against most water solutions of acids, alkalis, salts and ketones. Hypoallergenic gloves, glove liners and powderless gloves are alternatives for workers who are allergic to latex.

- **Neoprene gloves** are made of synthetic rubber and offer good pliability, finger dexterity, and high density and tear-resistance. They defend against hydraulic fluids, gasoline, alcohols, organic acids and alkalis, and generally have chemical and wear-resistance properties superior to gloves made of natural rubber.

- **Nitrile gloves** are made of a copolymer and provide protection from chlorinated solvents such as trichloroethylene and perchloroethylene. They offer protection when working with oils, greases, acids, caustics and alcohols, but generally are not recommended for use with strong oxidizing agents, aromatic solvents, ketones and acetates.