Safety

How SHOWA's ChemRest Tool Protects Safety Glove Users from Buyer's Remorse

James Langford | Dec 05, 2024

When you're working with hazardous chemicals, pulling on a pair of safety gloves before you get started might seem like a basic, even a simple, precaution.

It's not as simple as it looks: All gloves aren't created equal, and if you're not wearing the right pair, they'll do you little to no good.

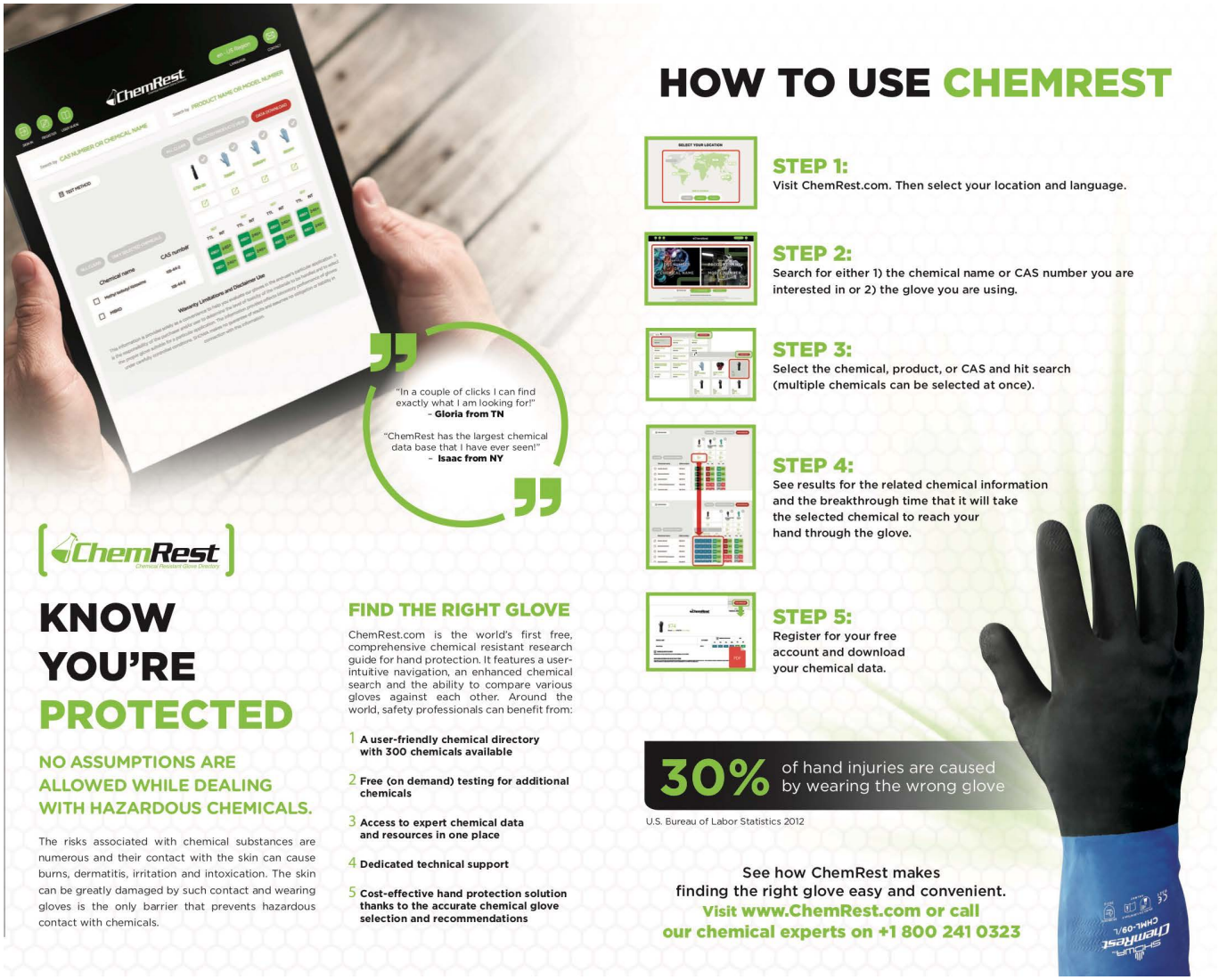
U.S. manufacturing businesses work with thousands of different chemicals, each with unique properties that interact differently with the materials in protective gloves. The result: A glove that protects wearers from formaldehyde, for instance, might deteriorate quickly when it's exposed to acetone.

While the U.S. Occupational Safety and Health Administration rule on safety gloves, ***Standard 1910.138***, requires employers to measure protective characteristics against the risks workers encounter, it can be difficult for buyers to tell which glove does what—especially given the arcane language of chemicals and the varying concentrations in which they're sold.

PPE-maker SHOWA Group recognizes that—and it has developed a tool to help: ***ChemRest.com***.

Splash Resistance vs. Prolonged Exposure

"It's a value-add website that helps customers identify which glove should be used for which chemical," explains Christie Gay, national account manager with SHOWA. "This is really important not only in chemical plants but in all manufacturing facilities: All of them use some types of chemicals, whether it's janitorial products for cleaning toilets and wiping countertops or stronger substances such as hydrofluoric acid and acetone."



The ChemRest database, which already includes hundreds of thousands of chemicals and is expanded regularly, ranks the SHOWA gloves capable of handling varied concentrations of each chemical based on resistance to splashes as well as prolonged exposure.

Looking for chemical-resistant gloves? Click here to shop Showa products on MSCDirect.com

Once users select their country and language on the ChemRest home page, they're guided to portals that let them search by chemical name, CAS (Chemical Abstracts Service) Registry Number, product name or model number.

"The risks associated with chemical substances are numerous, and their contact with the skin can cause burns, dermatitis, irritation and intoxication," SHOWA explains in a brochure detailing ChemRest's benefits. "The skin can be greatly damaged by such contact and wearing gloves is the only barrier that prevents hazardous contact with chemicals."

ChemRest can display search results for multiple chemicals at once, the company explains, enabling users to compare the time required for each to penetrate different gloves and reach a wearer's skin. Details such as sizing, color, material, grip texture, dexterity and lining are available, too, ***SHOWA says***.

For Safety Gloves, Looks Can Be Deceiving

Afterward, users can download the data by registering for a free account, contact SHOWA representatives for further assistance and request a sample pair of gloves to test in specific types of

jobs.

“The variety of potential occupational hand injuries makes selecting the right pair of gloves challenging,” OSHA explains in a manual on personal protective equipment. Failing to do so, however, may lead not only to severe injury and lost productivity but to costly regulatory fines: The agency ***imposed $460,000 in penalties*** last year, with nearly 60 percent charged to manufacturers.

“It is essential that employees use gloves specifically designed for the hazards and tasks found in their workplace because gloves designed for one function may not protect against a different function even though they may appear to be an appropriate protective device,” OSHA says.

Among the varieties of chemical-resistant gloves on the market, ***according to the agency***, are:

- **Butyl:** Made of a synthetic rubber, they protect against a variety of chemicals including peroxide, rocket fuels, corrosives such as nitric, sulfuric and hydrofluoric acids; and strong bases and alcohols.
- **Natural (latex) rubber:** Comfortable to wear, they’re popular for general-purpose uses, featuring high tensile strength, elasticity and temperature resistance. They have caused allergic reactions in some users, however; hypoallergenic and powderless gloves are possible alternatives.
- **Neoprene:** Made of synthetic rubber, they can protect skin from hydraulic fluids, gasoline and organic acids. Their chemical and wear resistance are generally superior to those of natural rubber.
- **Nitrile:** Made of a copolymer, they can protect skin from chlorinated solvents such as trichloroethylene and perchloroethylene as well as oils, greases and acids. They’re generally not recommended for strong oxidizing agents, ketones and acetates.

Skin irritation and chemical burns aren’t the only risks of using the wrong gloves, or worse, going without them, SHOWA points out: Long-lasting problems from cancer to reproductive-system damage can occur as well.

Consider These 4 Things When Choosing Chemical-Resistant Gloves

To help prevent them, the company suggests the ***following steps***:

- **Identify the chemicals involved:** Knowing the specific varieties, their physical state (gas, liquid or solid) and their concentrations is critical.
- **Assess exposure duration:** Long-term tasks require gloves with enduring protection while more limited jobs might need only single-use gloves.
- **Evaluate glove characteristics:** Consider both thickness and flexibility. While thicker gloves can offer more protection, they may limit wearer dexterity and comfort. Also determine whether the surface texture of the glove is suitable for the job: A product that’s slicker might make it tougher for workers to perform tasks that require a solid grip.
- **Review certifications and standards:** Approvals from accredited standard-setting organizations show gloves have been tested and meet specific performance criteria. Check gloves’ shelf lives to avoid more rapid deterioration than expected when using them.

What challenges have you encountered when buying chemical-resistant gloves? Tell us in the comments below.

