

HANDLING PHENOL PHENOMENALLY

SI Group improves transfer and containment of hazardous, highly viscous material with Drylok™ Disconnect Couplers from OPW Engineered Systems



In its liquid form, Phenol is classified by the U.S. Department of Transportation as a “Class 6.1 (poisonous) material.” It is highly viscous, toxic and can cause severe burns, while its vapors are corrosive to the eyes, skin and respiratory tract. Prolonged exposure to Phenol can have harmful effects on the central nervous system and heart, resulting in dysrhythmia, seizures and even coma.

Phenol is the lifeblood of the SI Group, Inc., Schenectady, NY, which is one of the world’s leading developers and manufacturers of Phenolic resins, alkylPhenolic resins and alkylated Phenols. The SI Group has operating facilities on six continents and works closely with clients that are situated in more than 90 countries around the globe. One of the SI Group’s operating facilities in the United States is known as SI Group Manufacturing and is located in Freeport, TX, USA. At this

location, much of the Phenol is supplied via railcar.

The combination of Phenol’s hazardous characteristics and the potential for product releases when unloading railcars means that the fittings and disconnects used in the handling of Phenol must be highly reliable and capable of total Phenol containment. Since 2007, SI Group Manufacturing has relied on Drylok™ Dry Disconnect Couplers from OPW Engineered Systems, Lebanon, OH, USA, for use in its Phenol-handling applications.

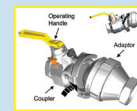
“We’ve had the Dryloks on our Phenol vapor and liquid lines since 2007 because we were looking for something that would give us as close to total containment of the Phenol as possible,” said Paris Watson, Maintenance Technician at SI Group Manufacturing. “With the toxicity of Phenol you can’t have any spills, so we had to make certain that we didn’t lose anything. To do that, we had to get the best disconnect that we could get – and that’s the Drylok.”

The Drylok meets the needs of SI Group Manufacturing, and handlers of toxic or hazardous materials worldwide, because its design – which meets or exceeds the emission and worker-

safety requirements set by the Environmental Protection Agency, OSHA and other regulatory bodies – features an interlocking handle that averts accidental spills by preventing uncoupling while the valve is open. The Drylok is also ideal for high-pressure applications since it can be opened and closed against 150-psi maximum head pressures, while its easy-flow interior optimizes the flow rate in high-pressure or high-viscosity applications. The Drylok also improves uptime since all repairs can be performed without the coupler being removed from the piping, and all primary seals are standard O-rings for easy replacement.

“The Dryloks have worked very well,” said Doug Wright, Manager-Quality Assurance for SI Group Manufacturing. “With the nature of this material and the dangers associated with it, we don’t want any leaks of this material at all and having the Dryloks adds a level of security for our technicians. With the Dryloks, it’s a much cleaner operation. They take some of the worry out of doing the job – and remove some of the fear, as well. They give us added peace of mind when handling this extremely dangerous material.”

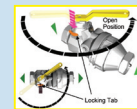
How the Drylok™ Eliminates the Phenol Fear Factor



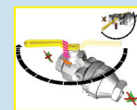
Push coupler onto adaptor by engaging lower jaw of coupler under lip of adaptor and tilting the coupler upward to engage top jaw.



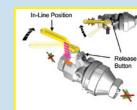
Turn handle counter-clockwise until lock engages. Coupler and adaptor are now locked together, but valve remains closed.



Press button on coupler and turn handle counter-clockwise until it locks. Valve is now open and will allow product to flow.



To disconnect, press button on coupler and rotate handle clockwise until it locks. Valve is now closed.



Press button on coupler and turn handle clockwise to the “in line” position. Press tab on opposite side of coupler to release the upper jaw and move the coupler away from the adaptor.



SI Group relies on OPW Drylok™ Dry Disconnect Couplers throughout its chemical plant.