

ISO Tanks Successfully Transfer Toxic Chemical

A chemical classified as a respiratory hazard is liquified and loaded into ISO tanks for its journey from Asia to the United States.

Written by: Lisa M. Kempfer

Maleic Anhydride, C₄H₂O₃ (MA), is a workhorse chemical used in the making of many products that are part of our daily lives--among them, paper, lacquer, lube-oil additives, pharmaceuticals, polyester and agricultural chemicals. Most consumers recognize this chemical as the white shiny surface on Corningware products. And while it touches lives in many ways, this chemical isn't something that can be touched. Contact with it causes third-degree burns. Breathe it damages lungs. When Ventura Transfer Company (Long Beach, Calif.) was asked to transfer/transport large batches of this compound, it first did a lot of due diligence. "It's classified as a Level 2 respiratory hazard," says Charlie Ring, VTC's business development manager who oversaw the Maleic Anhydride project. "It requires full face respirators and full body protective equipment, the same as for liquid acids. In fact, as a hazardous material, it's rated greater than most acids due to the corrosive nature and the elevated temperature."

The MA is manufactured in Asia, then heated to liquid form and loaded into insulated ISO tanks for the cross-water journey to the United States. During transit, the MA congeals into a solid form and must be heated back to a liquid state



upon its arrival in the UTransS. This reheating takes place at VTC's terminal, and requires getting the job done right the first time.

Mistakes Can Be Costly

As Trudi Leddy, operations manager of Miljac Inc., a specialty chemical distributor in New Canaan, CT, points out, "If there are four ISOs on the bill of lading, and one gets tied up in customs, the four are not going anywhere. And if the product doesn't get to the customer in a timely fashion, their plant can shut down." Bill Boydston, business manager,



performance chemicals, of JLM Marketing, Inc., a Tampa, Florida-based manufacturer/distributor/marketer of commodity chemicals, adds, "The Maleic Anhydride solidifies at room temperature and must be carefully heated for loading and unloading of the tanks, or it will discolor. Maintaining temperature is important. Allowing it to cool too much or be heated too much can result in the loss of the entire tankful, which equates to approximately \$40,000."

Obviously, there's a lot riding on how efficiently, and how well, the MA is brought back to shipping temperature. And since the cost of a ruined tank is the responsibility of the transfer company, VTC's Charlie Ring took special precautions before accepting an MA assignment. "Over a three-month period, we experimented with 40 to 50 loads--300 hours of testing," Ring recalls. "It has a melting point that ranges between 130o-140o F and we deliver it at temperatures from 150o to 170o, depending on customer specs."

Material Handling MANAGEMENT

The Maleic Anhydride had to be heated in stages to prevent it from building up moisture. It also had to be heated slowly to prevent it from changing color. And it had to be put under steam pressures that didn't allow the temperature to rise too quickly or too slowly to get it to flow efficiently. The material was corrosive, which created handling challenges. VTC devised a proprietary process to address these issues. It included incremental heating stages and the use of a unique rig in which an air bag tilts the chassis to promote efficient flow of the MA. "No huge thing, maybe," says Bill Boydston, "but VTC just seems to be a company that sweats the details."

In the end, the VTC handling process decreased the number of heating hours, while increasing the amount of usable MA. "We were actually able to remove more product than was possible following manufacturer's original recommendations," Charlie Ring adds.

VTC Goes The Extra Mile

According to Bill Boydston "When you have to bring eight ISOs up to temperature at the same time, you've got to have the proper equipment capable of handling that volume and lots of knowledgeable people to do that. VTC is one of the few companies out there good enough for the task."

Trudi Leddy's coworker Chris Anderson sees all of VTC's contributions as reflections of the company's dedication to customer support. "We definitely support them," she says, "because they support us so well."

From big challenges like taming Maleic Anhydride to smaller ones like cutting paperwork, it's valuable to rely on a company that has the resources, and the resourcefulness, to handle them all.

Source: Ventura Transfer Company



Diana Cuesta
Marketing Manager
dcuesta@venturatransfer.com
tel: 310-549-1660
fax: 310-835-4679