

PUTTING A DAMPER ON STATIC ELECTRICITY FIRES

Vortec spray nozzles eliminate static electricity fire hazard in facility manufacturing polyethylene foam.

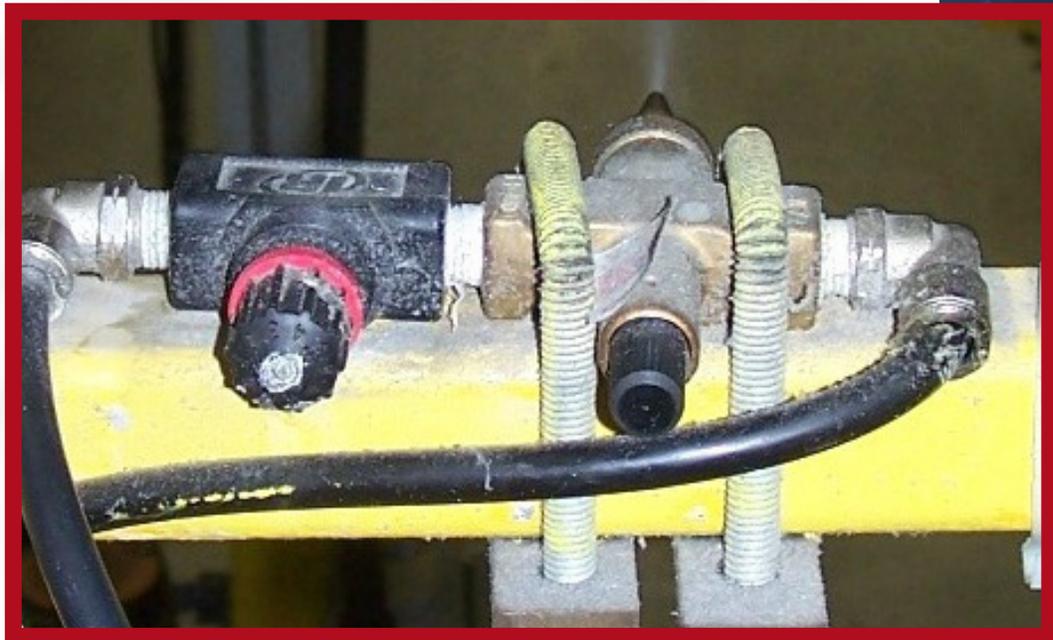
The Sealed Air Corporation has over 100 facilities worldwide, manufacturing protective packaging products including Bubble Wrap® Brand Packaging; Fill-Air® Inflatable Packaging; Jiffy Mailers® and various paper products. At one Sealed Air plant, polyethylene foam products are produced in rolls, sheets and planks in a broad spectrum of sizes.

At the plant, the raw materials for the foam are mixed, and then extruded through a die into various shapes. The plant routinely produces over 30,000 pounds of foam a week. Maintenance Supervisor Robert Gosselin is responsible for the care and upkeep of this facility which employs from 50-100 people. Until recently, he faced a challenge: the production of polyethylene foam involves hydrocarbon gases such as butane and propane and the foam itself generates static electricity. The presence of flammable gases and static electricity created a severe fire hazard. "Fortunately, we never had a major incident," Mr. Gosselin states, "but we did have fire hazard incidents where we had to cease all production and then later re-start."

To keep the working environment safe, Mr. Gosselin sought to keep humidity in the production room over 60%. To achieve that goal, he tried a variety of solutions. "We experimented with different brands of humidifying misters but there was always a problem. Either they plugged up too easily or the drops were too big and we ended up with puddles on the floor which resulted in a slipping hazard for employees. What we needed were nozzles that offered three qualities: a fine enough mist; repeatability, meaning they would keep functioning for a long time without maintenance; and also overall longevity. My initial experience with other companies' nozzles made me wonder if such a thing existed."

Gosselin first learned of Vortec's Sprayvector® nozzles through the website of an industrial supply house. He ordered 3 different Vortec nozzles initially and found one "fulfilled all the requirements for what we were seeking."

He ordered several more of this model, replacing all the existing nozzles in the plant with the Vortec Sprayvector® nozzle.



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Mr. Gosselin's choice of nozzle is the model 1703 Fogging Sprayvector, a compressed air-powered liquid spray nozzle which delivers a fogging style of humidity.



"Thanks to the Vortec nozzles," says Mr. Gosselin "We have reduced the rate of fires in the facility by 75%. This is important not only for worker safety but in terms of cost and production as well. Before, when we had to shut down in order to take care of fire hazards, all production ceased, costing us thousands of dollars for each incident."

Gosselin credits the Vortec nozzles with providing the Sealed Air plant with the constant humidifying necessary to maintain safety. "I've already recommended Vortec products to the maintenance managers at other Sealed Air facilities" he notes. "I am very satisfied with how these nozzles perform and would rate the Vortec nozzles as at least a 9 out of 10. My experience working with Vortec's staff has also been very positive—they are very knowledgeable about their products and about how those products fit in different environments."

Vortec Sprayvector® Liquid Spray Nozzles

Sprayvector nozzles provide ultra-fine droplet-sized sprays for evaporative cooling, atomization, humidification and wetting. Superior to conventional hydraulic and piezoelectric nozzles, sprayvectors produce spray patterns that can be widely diffused or directed. The liquid stream is entrained by high velocity compressed air to create a range of micron-level spray droplets, resulting in greater surface coverage than conventional nozzles. With this more efficient use of the liquid, Sprayvectors accelerate air-liquid interaction to give more effective cooling, humidifying, wetting and dust control.

Three types of Sprayvectors® are available, all producing adjustable flow rates from 6 to 30 gallons per hour.



Model: Fogging (directed spray)
Droplet size: 20 – 60 microns
Liquid viscosities up to 1100 cP.



Model: Atomizing (directed spray)
Droplet size: 60 – 200 microns
Liquid viscosities up to 1100 cP.



Model: Humidifying (wide spray)
Droplet size: 20 – 200 microns
Liquid viscosities up to 100 cP.

For more information on Vortec Nozzles, [click here](#) or scan this QR code with your smart phone.



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