

WHAT WORKS
Dispensing Woes
cured in N.C.

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Resin casting company substantially stops acetone spills

Companies that use aggressive chemicals often purchase those chemicals in 55-gallon drums, and the majority of spills happen when getting the chemicals out of the drums. Workers often manually lift and tip the drum or use a fork truck to pour the contents into another container, a cleaning tank or a process vessel.



Pressure-action drum pumps facilitate fluid transfers.

At Carolina Casting Inc., High Point, N.C., drums of acetone were stored upright to avoid leakage. To dispense the solvent, the 350-lb. drums were moved to another location, placed on a cradle, attached to bonding and grounding wires, and tilted to permit dispensing through hand control of a faucet. After dispensing, they were returned to the storage area. The process was slow, labor-intensive and subject to spills, according to Dan Stiles, plant engineer.

The company tried using rotary hand-crank pumps with the drums in a vertical position, but pump pulsing led to splashing and the pumps were unreliable and costly to repair. Air-driven pumps were turned down because of high initial costs, expensive parts and high maintenance.

"We decided to try pressure-action pumps," says Stiles. Sourced from GoatThroat (www.goatthroat.com), "The polypropylene pumps proved reliable and permit us to keep our drums in an upright position." The pumps are held in place with an airtight rubber compression fitting. Pressure is added by pumping a piston several times, and flow is controlled with a spring-loaded tap. An internal safety design limits pressure to 7 psi, which meets UN safety standards.

At Carolina Casting, fixed grounding and bonding wires are hooked directly to an adapter that delivers compressed air at 2 psi. "This has proved ideal for dispensing into small containers," says Stiles, and also is available in larger, mobile units for filling 20-gal. to 40-gal. containers at 3.3 gpm. "No more bucket-carrying of acetone," he says. "The new procedure is faster and safer, and has helped us exceed our environmental compliance requirements." ❖