

# Circular Solutions

A case study from



## Bad chemistry can kill the perfect caster match



Sometimes you think you have chosen just the right caster for your equipment. It handles the right amount of weight. The equipment seems to move easily. The cost was within your budget. It's the perfect match. What could go wrong?

Lots. Read about this recent experience of one of our customers.

Our customer manufactures paintballs – you know those pods of paint that are used in paintball guns and hurt like a SOB when they hit you. The paint is actually mixed in huge vats that look something like those used for hops when brewing beer. Each of these barrels holds about 400 lbs. of paint and doesn't need to be moved that often. But when they were moved, it is in all directions – forward and reverse.

The customer started off with a simple zinc plated caster properly rated for the weight. They were using a 5" Polyolefin wheel that was seemingly the right choice because the floors in the plant were smooth and level. But here's the thing. The casters were rusting like crazy and the rust was staining the floors. On top of that, the wheels were disintegrating – literally falling apart. If that wasn't bad enough, even the vats with surviving casters were getting harder to move.

The last problem was problem the easiest to solve. Because the casters were being moved in all directions with significant weight, they needed roller bearings to provide ease of motion. They add to the cost of a caster but if you can't move the equipment, you are paying an even higher price.

We had to do some investigation to find a solution to the other problems. What we discovered was a bad chemical reaction. It turns out that the vats are put through a high-pressure wash in which some strong solvents are used. The chemicals were destroying the finish on the caster and eating away at wheels. Once we made that discovery, the solution was easily at hand.

We switched to a stainless steel caster and used an Envirothane™ wheel. The stainless steel could withstand the both the pressure and the chemicals in the wash. Envirothane was the perfect choice because of its durability. Made from non-marking polyurethane, it is resistant to most chemicals and has the durometer to handle heavy loads without flat-spotting.

Now, all the vats are similarly equipped and we have a perfect caster match even with the bad chemistry.

[Download our chemical chart](#) that lists over 75 different chemical compounds and specifies the wheels that are best for each.

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For more information on how CasterWorld can provide solutions for your wheel and caster needs, call 1-877-473-9309 or email [sales@casterworldbc.com](mailto:sales@casterworldbc.com). Visit our website at [www.casterworldbc.com](http://www.casterworldbc.com)