

Weather in a box

With the purchase of a new environmental chamber, MCC can replicate plant and warehouse conditions in the lab – even tailor testing to an individual customer’s actual parts and manufacturing conditions.

The new ESPEC LHU112 environmental chamber can be programmed to cycle through a number of temperature and humidity combinations. Changes that might be experienced over weeks or months can be cycled into a 24-hour period with temperatures varying from -4 F to 185 F, and humidity from 0 percent to 100 percent.

R&D Cleaners Group Leader E. Jon Schnellbacher says, “The chamber gives us the ability to choose a variety of methods or environments. Previously, we were limited to one method, ASTM D1748, where we would coat panels and hang them over bubbling water at 120 F until they rusted. We also can test actual customer parts in the chamber, which improves the accuracy of our results.”

The computer-controlled environmental chamber will assist MCC as it continues to expand its product line to include newer, water-soluble rust preventives and combination cleaners and rust preventives. Schnellbacher says, “We can program the chamber for the worst imaginable cycle of plant or warehouse conditions, which enables us to test the products we’re developing quickly and cost effectively. We also plan to use the unit for competitive and benchmarking tests.”



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master chemical
CLEAN Sheet

You like us.
You really, really like us!

We were thrilled by the feedback on the first issue of our quarterly Master Chemical Clean Sheet. We strive to please, and hope you will continue to find it useful and edifying.

That said, we’d like to share your ideas in the next issue. Tell us how you have used the information you’ve gleaned. Have you shared it with customers? Has it helped you address or solve a problem? What other information would you like to see included?

We’ve been truly amazed by some of the innovative uses you’ve found for the newsletter so far: wrapping dead fish, lining bird cages, blotting spilled coffee and training puppies. Others have reported the size and weight ideal for swatting flies, lining drawers, packing breakables and making paper airplanes. Your creativity has us eagerly scanning our e-mails and ripping open your letters. Keep those ideas coming.

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Science 101

Test your pH



SCIENCE CORNER

Test out of this column by correctly answering the following questions (answers appear at the end of the column):

1. True or false: The pH of the cleaner must be compatible with the metal being cleaned.
2. True or false: Surfactants in a cleaner act as alkaline builders.
3. True or false: A rapid drop in a cleaner’s alkalinity improves cleaning ability.
4. True or false: The type and amount of soil on parts affect a cleaners active alkalinity.
5. True or false: Bubbling air into the wash bath boosts alkalinity.

Mechanical rabbits and alkalinity don’t stand still

What do the mechanical rabbits in a county fair midway shooting gallery have to do with maintaining the alkalinity in cleaners? It may be a stretch, but they are both moving targets. In the last issue, we reviewed how a cleaner with the wrong pH could damage the metal part it is supposed to clean – the equivalent of shooting the rabbits with a cannon.

Hopefully, we clarified the issue of substrate and pH compatibility, or in terms of our analogy, matching the weapon with the sport. Now, we can work on aim. Since it’s more difficult to hit a moving target, we’ll explore how to slow those bunnies down, so you can hit the targeted pH consistently.

A cleaner’s pH is determined by the alkaline builder used. Ingredients, such as phosphate, carbonate, amine, silicate, gluconate and EDTA, are considered “builders.” They build up the pH from neutral 7 toward the alkaline pH of 14. This “built alkalinity” helps clean fats, oils and greases from parts. Generally, the more alkalinity, the better and longer the bath will clean without requiring additional cleaning solution.

With industrial cleaners, cleaning ability is measured by the amount of active alkalinity in the bath. An ideal bath has an alkalinity that’s high enough to clean, yet a pH that won’t damage the metal of the parts. Let the active alkalinity drop quickly, and the effect on cleaning deteriorates

rapidly.

Two things greatly affect how quickly or slowly the active alkalinity of a bath changes. The first, which you may not be able to control, is the type and amount of soil on the parts. Soil contaminates the bath and depletes the cleaning ingredients, thus limiting the number of parts you can clean.

The second thing affecting active alkalinity, which you may be able to control, is the method of agitating the wash bath and the amount of air introduced. All air contains carbon dioxide, and adding carbon dioxide to the bath has the same effect as running soiled parts through it. Eventually, the alkalinity will be neutralized and the pH will drop. In fact, it’s possible to bubble air through a bath, not run a single part, and find that the bath has lost its active alkalinity – and its ability to clean parts – after two or more weeks. So, the easiest way to slow those rabbits down is to maintain your bath without bubbling or blowing air through it. Use only mechanical mixers or pumps to agitate. If you have a spray washer, try to avoid running the spray nozzles when you are not washing parts.

There you have it – use the correct weapon, perfect your aim and bag sparkling clean parts every time.

Test answers: 1) true (This was a review question. If you missed this one, repeat Science 101 in the January 2000 issue); 2) false; 3) false; 4) true; 5) false

Show Stoppers

Leads are going to be coming your way, compliments of Andy Tokar, district manager for northwest Ohio and lower Michigan. Andy has developed a relationship with Four Way Machinery and Sales, a Jackson, Michigan, manufacturer of barrel- and auger-style washers, as well as conveyor-type, high-pressure spray washing machines. The company keeps a number of our cleaner products on the showroom floor, and Andy has provided them with SPENCER's WATCH (SW) forms, modified for their use. Now, Four Way salesmen help their equipment customers complete the SW form and fax the forms to Jennifer Rogers. A recommendation is made, and the SW form is faxed to the appropriate district manager for follow-up. As a result, the customer receives a recommendation for cleaning chemistry even before the machine is installed.



SKRAMBLER 2™ seals have been upgraded. A few customers using high pH cleaners, such as SKRAMEX, have reported concentrate check valve seal failures. All new units are being shipped with EPDM seals. SED has a supply of EPDM seals available as warranty replacements, should any of your customers experience problems.



The tri-fold TASK™ information sheet has been updated to reflect approval by the California South Coast Air Quality Management District. Request copies from the MCC mailroom.

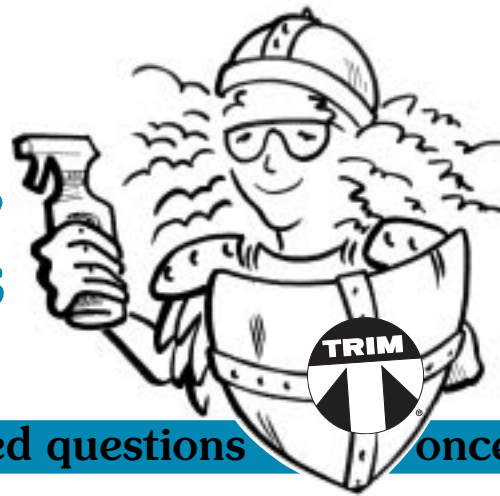
A new UNIMIX® for cleaners is available now from SED. The UNIMIX EMC has been designed, tested and proven to handle highly active cleaner formulas, such as TRIM® Clean CCT and SKRAMEX™. Similar to the UNIMIX EM, the UNIMIX EMC has a mix ratio of 1 percent to 6 percent.

In Canada, Mike Dreisberg reports that one of his major customers has converted all of its plants from "Spray Nine" to TASK. Better cleaning, lower cost and TASK's environmentally friendly profile all contributed to this success.

The Food and Drug Administration has published new rules for labeling cleaning and sanitizing agents used in "federally inspected meat and poultry plants." Until about two years ago, the FDA maintained a laboratory that would test cleaning products and then "list" them. The new standard requires only that "cleaning compounds ... used by an establishment must be safe and effective under conditions of use." If you would like to read more about this issue, log on to: <http://fsis.usda.gov/oa/background/sanitation.htm>.

The new TRIM® "Clean-shot" cleaner trouble-shooting guide is available on the MCC Internet site at www.masterchemical.com/cleantsg.

Dear Xena, Warrior Princess of Cleaners



Answering frequently asked questions once and for all

Dear Xena,

We're seeing spots. What tips can you offer regarding cleaners, cycle times and sequencing for aluminum parts?

Spots belong on dalmatians, leopards and ripe bananas – not finished aluminum parts.

Applications can be tricky – just ask MCC District Manager Joe Ducher about working the kinks out of a large, multi-stage washing system doing aluminum and steel.

The customer was using a silicated cleaner at 3 percent and 140 F in stage one and rinsing with DI water for stage two and stage three. After the wash, the parts were clean of all soils, but they had SPOTS – SPOTS everywhere!

Spots are not what you expect following two DI rinses. So, Joe played Sherlock Holmes and discovered that the **drain time on stage one was four, (yes, four) minutes. The hot parts were flash drying with a silicated cleaner on them, and the customer couldn't change the drain time.**

To fix the spotting problem, we replaced the silicated cleaner with a non-silicated aluminum-safe cleaner, the new WB 9700-27E. Things seemed to be going just fine until another call came in regarding spots of a different sort appearing on the aluminum parts after they dried. Now, we had dark spots instead of the white silicate spotting. These spotty parts were shipped overnight to the Test Cave, where the spots were determined to be contact corrosion. WB 9700-27E won't cause aluminum corrosion, but it won't protect against contact corrosion.

So, how could we get a silicated cleaner like CLEAN 2023 "Big Al" to protect the parts and then get it rinsed off before it could dry? Since there were two rinse stages, and no time delay from stage two to stage three, we could let "Big Al" do its thing in stage two.

Now we have WB 9700-27E at 3 percent in the first stage, CLEAN 2023 "Big Al" at 3 percent in the second stage and the third stage is a DI rinse. The parts are clean, there are no spots of any kind, and the customer is a happy camper, because the system is working fine.

The moral of this story is: silicated cleaners are great on aluminum parts – just don't let those parts dry before you rinse them.

P.S. One final suggestion – always clean your glasses before inspecting finished aluminum parts.

Not-yet-ready-for-prime-time: Update on new products looking for a test site

Applications Specialist Jennifer Rogers says, "Many thanks to those who answered my e-mail regarding test site feedback. Following are updates on the new products we're currently testing."

WB 9806-20

The new machine cleaner has out-performed our wildest dreams (now you know what lab geeks dream about). The overall acceptance on this product has been excellent. WB 9806-20 mixes easily with water, cleans most scums and residues nicely, and has a good slug of biocide and fungicide for the tougher jobs.



WB 9805-75

In a high-pressure spray washer (no dip tanks due to its most excellent oil demulsifying ability), the brass cleaner has gotten good reviews for brass as well as copper, most aluminum and ferrous alloys soiled with a light oil or soluble oil. WB 9805-75 has proven to be a great corrosion inhibitor for steel, too. One note of caution – keep the temperature at 120 F or below. Also, near neutral pH should be a good selling point.

WB 1402-80B and WB 9700-27E

Two very good "sleeper" products. These two are the yin and yang of the test products. WB 1402-80B is VERY aggressive and is capable of removing the nastiest soils from steel parts. One of the initial test sites is quite successfully removing quenching oil and heat-treat scale from steel bolts. WB 9700-27E, on the other hand, is about as mild-mannered as a cleaner can be while still getting the cleaning job done. It is a low-foaming, multi-metal cleaner without silicates, boron or phenols. It does a great job cleaning coolants or light oils at room temperature or slightly elevated temperatures from most metals (even aluminum alloys).

WB 9700-29G

The new water-based corrosion preventive began testing about 6 months ago. It has received great reviews for preventing corrosion, and people like it because it does not leave an oily film behind.

All of these products continue in the testing phase, and additional test sites are needed. Contact Jennifer Rogers, 419/874-7902, X-7817, or Jody Gardner, 419/874-7902, X-7802, to make test arrangements.

The right stuff

Many large automotive and aerospace manufacturers and suppliers are required to purchase their chemicals from QS 9000 certified manufacturers. Automotive and aerospace companies manufacture to exact tolerances – product quality and safety are at stake. They hold their vendors to the same high standards, often expending a great deal of time and effort to identify qualified vendors.

MCC is one of only a few QS 9000 certified manufacturers of cleaning products, including TASK, CLEAN F2 and SKRAMEX. This gives you a product and vendor that are pre-qualified and meet the needs and requirements of these demanding industries. So, keep a sharp eye out for opportunities to upgrade these customers to TRIM® CLEAN products and help them achieve their quality system requirements.

QS9000