

SYSTEMS THINKING

RECLAIM COMPATIBLE CAR WASH PRODUCTS

Understanding the Relationship Between Car Wash Products
and the Car Wash Reclaim System



VER-TECH
LABS

INTRODUCTION

“WATER IS THE NEW GOLD.”

In 2011 fracking, droughts and other climate issues were dominant election topics in the United States. Around the world, experts associated with the water industry debated whether water should be treated as a commodity or as a human right. One simple statement stood out – “water is the new gold.” The carwash industry currently depends upon a resource that will only become more scarce in the future. The carwash owner’s business mantra used to be “Clean Cars and Make Money,” however, that mantra needs to change to “Clean Cars, Make Money and Save Water.”

A car wash is a system of interrelated parts. As a chemical manufacturer, my goal is to create carwash products that clean well and optimize the car wash system. With the ever increasing requirement for car washes to use a water reclaim system, Ver-tech Labs focuses on formulations that are most compatible with current reclaim systems. We have also researched and formulated for the next generation of reclaim systems which will be based on biological processing of water. Understanding the role of reclaim compatible car wash products is essential to **Clean Better**.

Tony Vertin, CEO, Ver-tech Labs

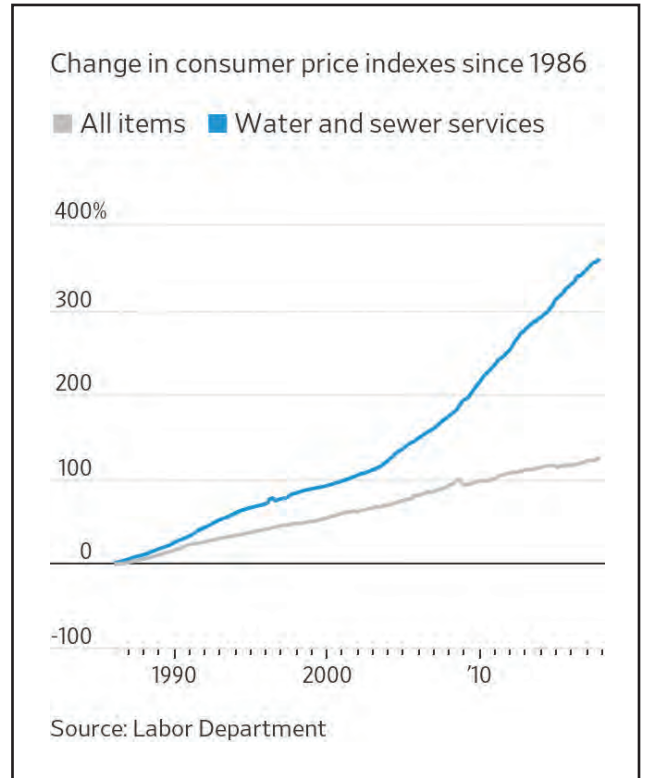


Who Needs a Reclaim System?

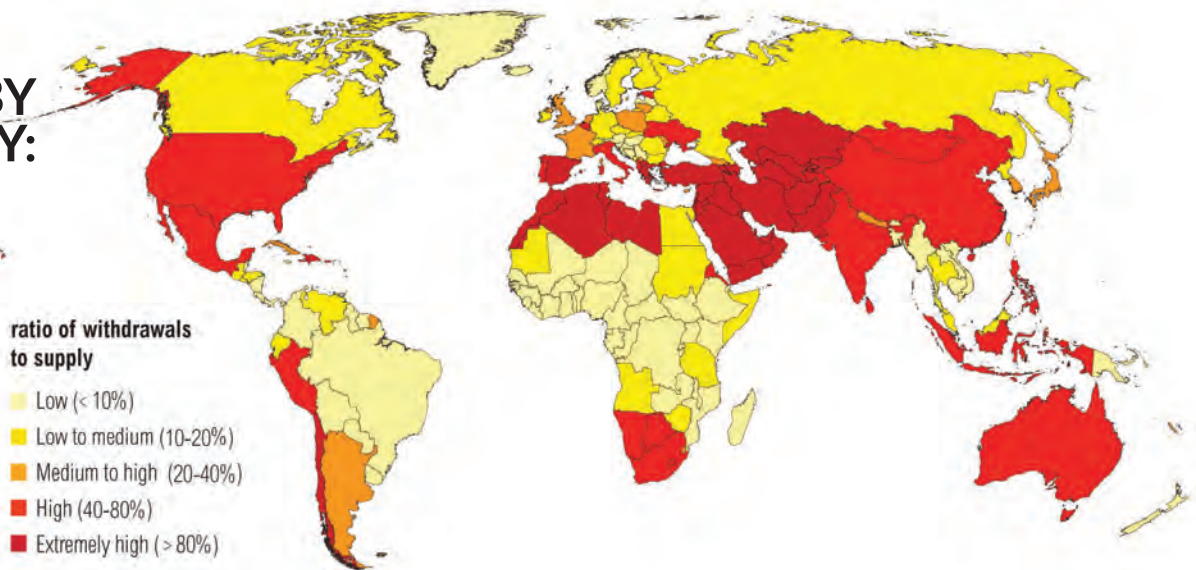
Everyone will need a water reclaim system in the future.

In March 2018, The Wall Street Journal reported that water and sewage bills have increased an average of 5.5% as communities have repaired aging water and sewer infrastructures. Municipalities are bound by the Environmental Protection Agency to comply with Clean Water Act. Costs will increase for households, businesses and industries. Water usage has already become a significant cost in the operation of a car wash and will continue to increase.

Aside from aging infrastructures, the availability of water in the United States and throughout the world continues to decrease (see map below). Experts believe that in the future, water will be sent via pipelines to areas of need. The ability to maintain a steady source of water may also lead to global conflicts. Bottom line, everyone will need to consider water saving strategies.



WATER STRESS BY COUNTRY: 2040



NOTE: Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

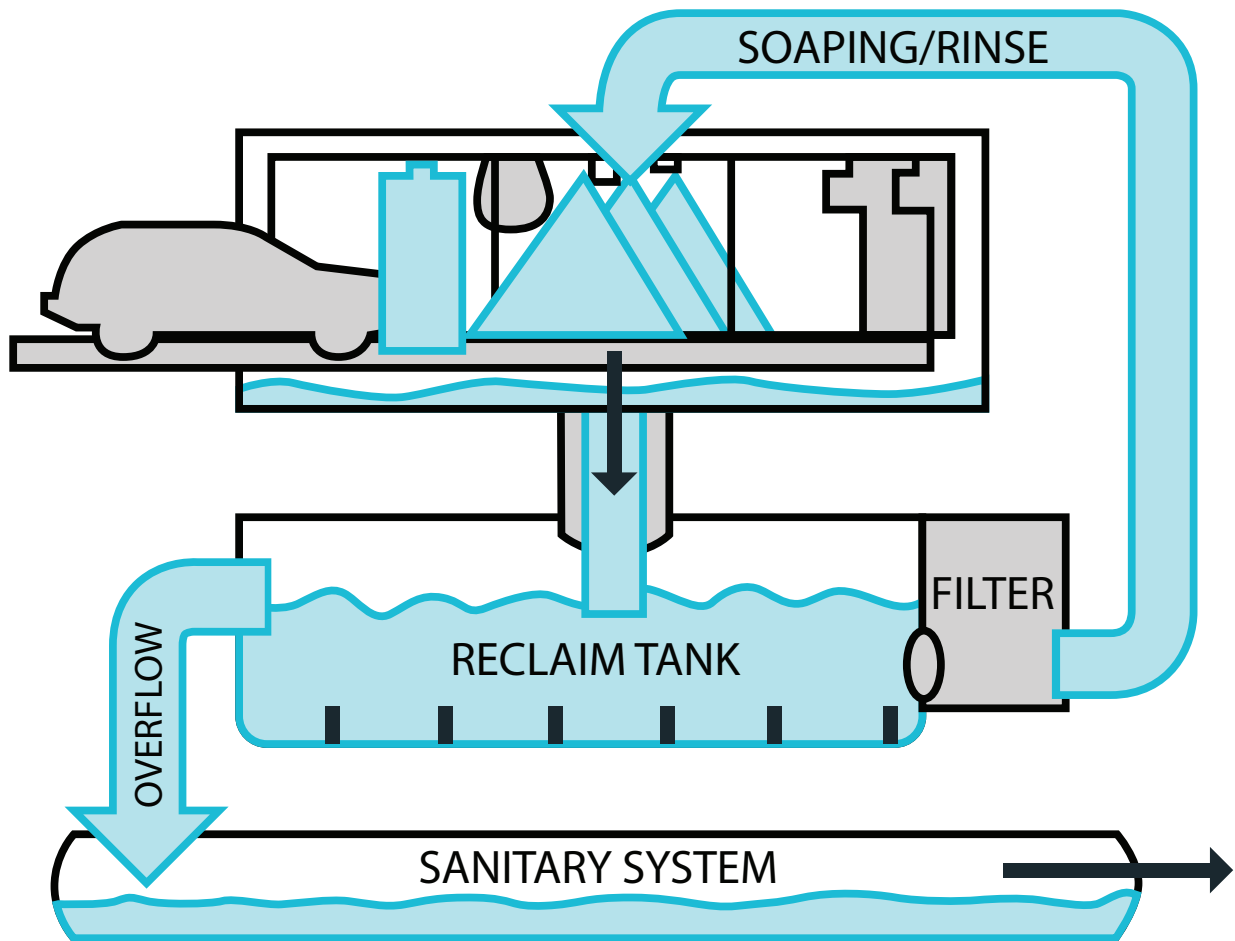
For more: ow.ly/RiWop

 WORLD RESOURCES INSTITUTE

The Car Wash Reclaim System

The car wash water reclaim/recycling system captures vehicle wash waste water and recycles it throughout the wash process. The system typically uses settling tanks, filtration, oxidation and other equipment to “clean” the water for reuse.

The reclaim system is often thought of as an independent piece of equipment but it is actually a complex, component of your car wash system. When a reclaim system is purchased, the hope is it will be able to accept all dirt, grease, oils, salts, chemical products and anything else that flows into the drain and transform it into clean water for car-washing purposes. The diagram below illustrates how a typical car wash reclaim system recycles water.



Recycled water can be used throughout the wash process. While most car washes use fresh water for the final or spot-free rinse, water reuse technology continues to improve resulting in over 90% of water reused in some washes. Commercial car washes today use less than half of the fresh water used to wash a car at home or at outdated car washes that do not incorporate water reclamation technology.

Reclaim System Pros and Cons

PRO 1 | Stay in business. You may be required to have a reclaim system to operate a car wash in your locale.

PRO 2 | Save money. Using recycled water will help you save in water use and sewage costs.

PRO 3 | Marketing opportunity. An increasing number of consumers are interested and gravitate towards businesses that recycle, reduce, reuse and contribute towards sustainability efforts.



CON 1 | Reclaim system initial cost. There are many types of reclaim systems on the market. Even the most basic systems will cost a few thousand dollars.

CON 2 | Reclaim system odor. Dirty water naturally smells bad. You will never know how many customers you have lost to a smelly carwash or a carwash that leaves a lingering malodor on the customer's car. Controlling the odor is also a problem. Additives and ozone treatments can be expensive. Additionally, ozone production equipment can threaten the health of employees exposed to ozone.

CON 3 | Decreased cleaning due to dirty water. Not all reclaim systems are able to 'clean' the water sufficiently. Dirty water and insufficiently filtered water will create problems in dispensing equipment. The end result is a dirty car and unhappy customer.



CLEAN, ODOR-FREE RECYCLED WATER CAN BE ACHIEVED

WHAT DOES YOUR RECLAIM WATER LOOK LIKE?



THE SAMPLE
ON THE LEFT OR
THE SAMPLE ON
THE RIGHT?*

*from two different wash sites



To address car wash reclaim system challenges, we need to look closer at some factors:

- Classification of impurities (solids, contaminants, organic and inorganic compounds, etc.)
- Chemical processes including precipitation, flocculation, coagulation
- Biological processes at work, both aerobic and anaerobic
- Sludge digestion
- Pumping strategies

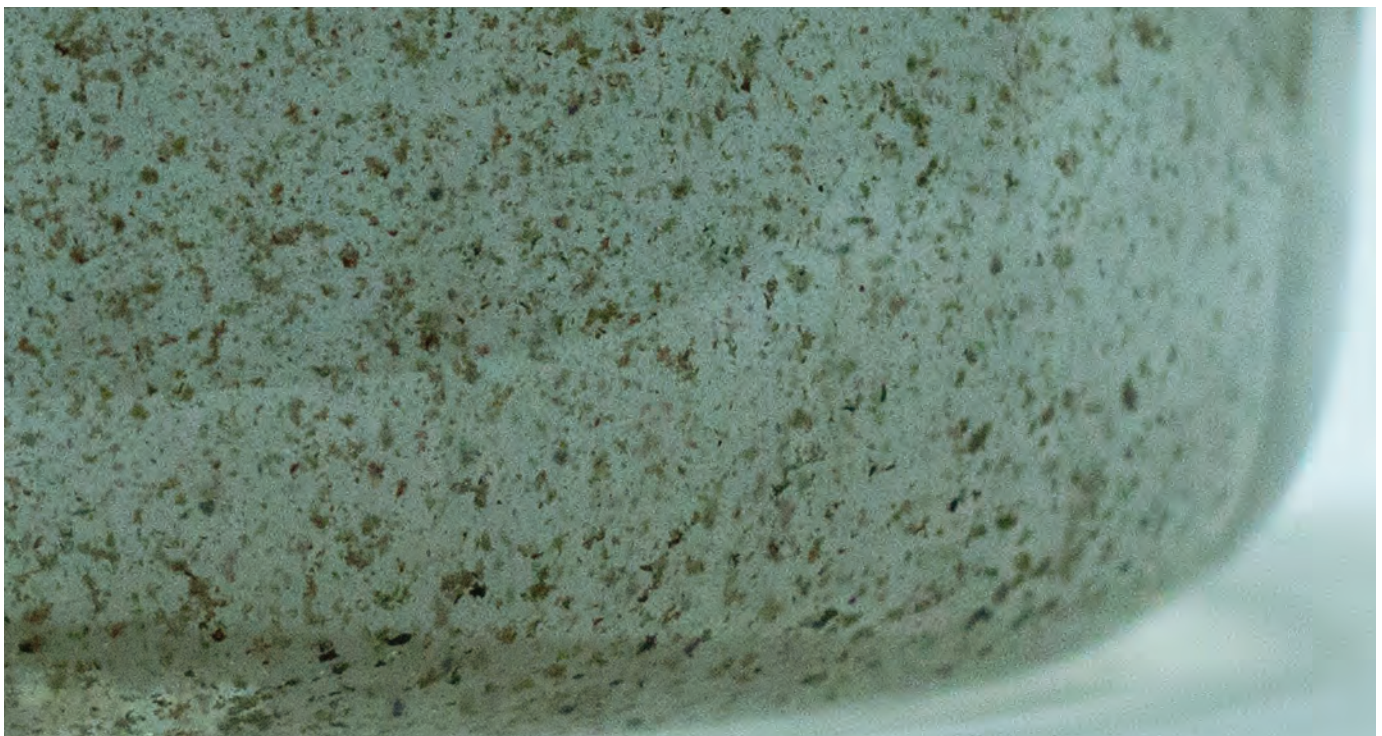
Complex ideas but all related to chemistry. Is it any surprise that the **key component** to a healthy reclaim system is **using the right car wash products?**

MAINTAINING A HEALTHY RECLAIM SYSTEM IS SIMPLE

USE RECLAIM COMPATIBLE CAR WASH PRODUCTS

Remember the concept of an integrated system? Systems work better when the individual elements are designed to work together.

By their very nature, reclaim systems can provide a hospitable environment for masses of contaminants and bacterial colonies that create malodor. When car wash products are non-reclaim compatible, they contribute to the formation of masses that support bacteria and collect contaminants. Systems using non-reclaim compatible chemicals will be characterized by odor, dirty recycled water and mechanical problems such as clogging of equipment.

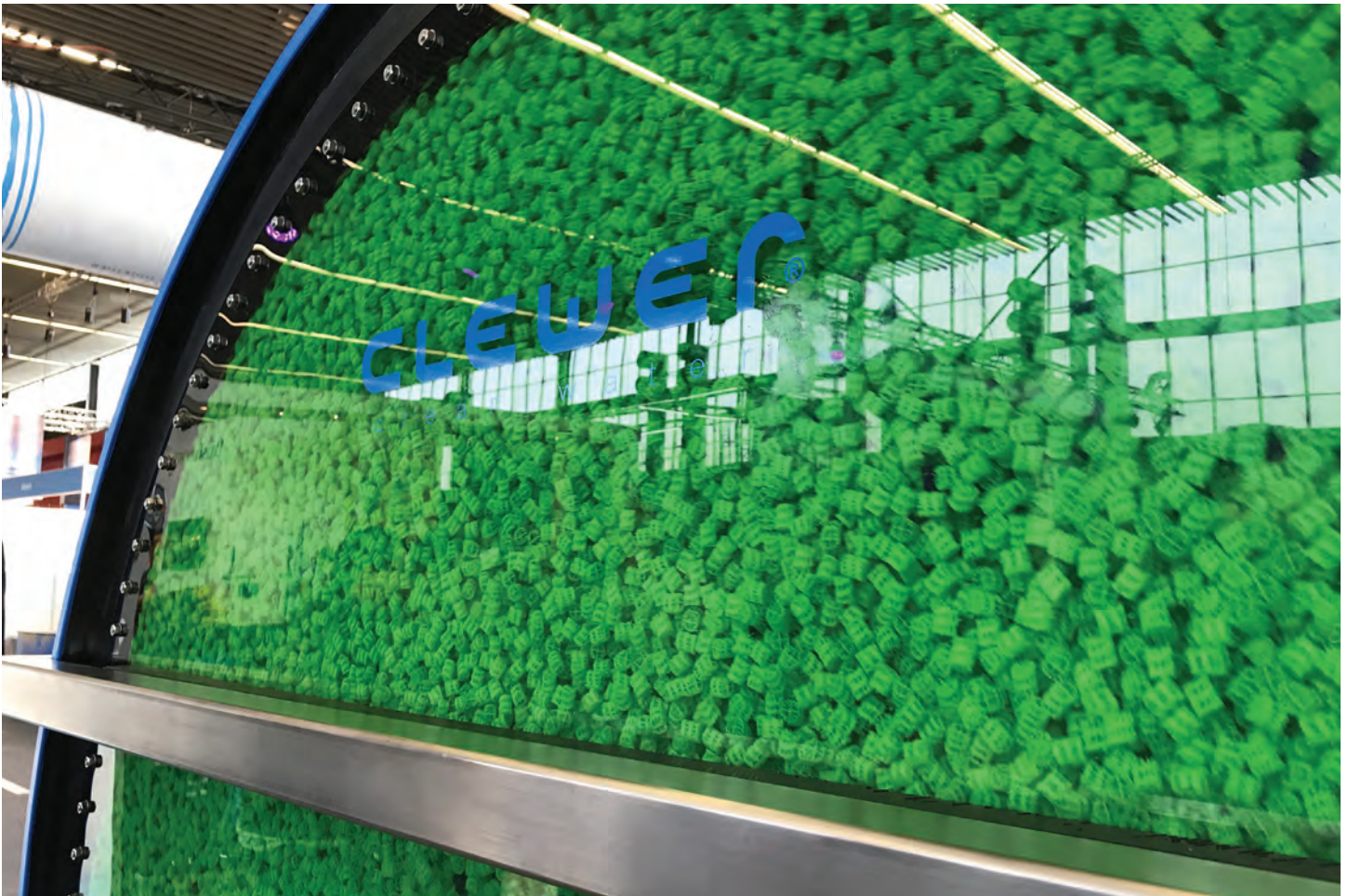




Reclaim compatible products are formulated to work together within a reclaim system. These products create an environment for 'good' bacteria to efficiently carry out the process of biodegradation and minimize the ability for clusters of 'bad' bacteria that create malodor.

Using reclaim compatible products is comparable to creating a balanced system where wash process water continues to clean itself and any water within the system. Additives such as bleach, hydrogen peroxide or ozone provides temporary results for malodor as they are effective at killing bacterial colonies. However they kill all types of bacteria including 'good' bacterial colonies.

Reclaim compatible products will assist in the promulgation of aerobic bacteria, which digest contaminants effectively but do not release sulfur containing odors like anaerobic bacteria does. The end result is cleaner water and significantly reduced odors.



THE FUTURE OF RECLAIM TECHNOLOGY IS ALREADY WORKING IN EUROPE.

The Clewer Rotating Bed Biofilm Reactor (RBBR) technology is based upon the principle of growing target bacteria on carrier surfaces for wastewater treatment. In the United States some washes are using reclaim systems that capitalize on the biological process to clean contaminants and chemicals in wastewater.

HOW IS VER-TECH LABS FORMULATING FOR THE FUTURE?

- Formulates with biodegradable surfactant packages in our products
- Removing mineral seal oil from products
- Removing silicone from products

Our soap and detergent formulations will maintain or increase your exceptional cleaning capabilities. Tire dressings, drying agents and chelation agents will be a challenge but we are confident in the research and development process of our technical team.

The future reclaim system will be a mini wastewater treatment plant that demands the use of reclaim compatible car wash products.



How do you know if the car wash products you are currently using are reclaim compatible?

Your chemical representative is the first person to ask about the car wash products you are using. He/she is responsible for ensuring that the best mix of car wash products is being used in your wash. If you have a reclaim system, all products should be reclaim compatible.

If you would like to test your products yourself, Ver-tech Labs offers a free reclaim compatibility test kit. Contact us at information@ver-techlabs.com with your name and car wash location. We'll send out your free test kit to the car wash.

THE FUTURE OF CAR WASH PRODUCTS IS VER-TECH LABS RECLAIM COMPATIBLE CHEMICALS. PUT THEM ONLINE IN YOUR WASH TODAY!

TAKE THE VER-TECH LABS RECLAIM SYSTEM CHALLENGE

In wash after wash, Ver-tech Labs' chemical representatives have put our products online and within days, owners, operators and customers notice that the car wash smells a lot better.

I always offer \$500.00 to any car wash owner if we can not eliminate the malodor of his reclaim system in two weeks by switching all car wash products to Ver-tech Labs products. I have not paid anyone yet.

If you have a car wash with an operational reclaim system and wash at least 1000 cars weekly – why not contact us and take the challenge?

You can clean better with Ver-tech Labs.

Tony Vertin
CEO, Ver-tech Labs

RECLAIM COMPATIBLE PRODUCT LIST

All of our products below are reclaim compatible and environmentally friendly.

EXT470 LIGHTNING	low pH (acid) detergent	targets mineral based soils, cleans glass and metal
EXT430 VISION	low pH (acid) detergent	targets mineral based soils, cleans glass and metal, excellent wall cleaner
EXT460 GOLDEN KNIGHT	high pH (alkaline) detergent	targets organic soils and petroleum
EXT432 BLACK KNIGHT	high pH (alkaline) detergent	targets organic soils and petroleum, can be used for other high pH applications
EXT126 DOUBLE BARREL	prep gun soap	high pH, additional applications include debugger, wheel cleaning, presoak
THU100 THUNDERBOLT	prep gun soap	high pH, additional applications include debugger, wheel cleaning, presoak; hard water tolerant
EXT138 WHEEL BLASTER	wheel cleaner	high pH, hard water tolerant, no hydrofluoric or sulfuric acid
EXT291 JOLT	foam detergent	neutral pH, high foam
EXT429 FOAMY VISION	foam detergent	low pH, excellent lubricity, rinses well
EXT165 LUXE POLISH	triple foam	high foam, free rinsing, concentrated, Blue/Green/Red/Yellow/White
EXT167 SNAP COAT	triple foam	flash foam that collapses quickly, free rinsing, Blue/Red/Orange/White
EXT600 MAGMA SHINE PLUS	all surface protectant	complex silicone/carnauba wax, high foam, lava applications
EXT425 SNAP SHIELD	all surface protectant	carnauba wax, shine, water repellency
EXT508 SNAP SHINE	clear coat protectant	premium sealant and protectant, high gloss
EXT147 BONE DRY	drying agent	sheeting water action
EXT150 QUICK DRY	drying agent	beading water action
EXT450 SALT SHIELD	salt neutralizer	cleans and neutralizes road salts, deicers, dust suppressants; enhanced protection between washes

