Colonial Chemical

Innovative Formulation Solutions for Home and Vehicle Care

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Home Hygiene

10 INTERESTING CLEANING FACTS

- YOU CAN BURN 100 CALORIES FOR EACH HOUR OF CLEANING.
- BY SIMPLY DISINFECTING YOUR DESK FREQUENTLY, YOU CAN REDUCE SICK DAYS IN THE OFFICE BY 30%.
- OFFICE PHONES HAVE OVER 25000 GERMS PER SQUARE INCH.
- MOST OFFICE DESK CONTAIN 400 TIMES MORE BACTERIA THAN A TOILET SEAT.
- THE AIR QUALITY IN A CLOSED SPACE CAN BE UP TO 500% WORSE THAN OUTDOORS.
- ONE SQUARE METRE OF CARPET CAN HOLD APPROXIMATELY 1KG OF DIRT.
- DUST PARTICLES ARE COMPRISED OF 70% DEAD SKIN FLAKES.
- FOR ANTIBACTERIAL CLEANER TO BE EFFECTIVE IT MUST BE LEFT ON SURFACES FOR 30 TO 60 SECONDS BEFORE WIPING AWAY.
- THE AVERAGE WOMAN CLEANS FOR 12, 896 HOURS IN HER LIFETIME, WHILE MEN CLEAN AN AVERAGE OF 6,448 HOURS.
- TYPICAL OFFICE WORKER'S HANDS COME IN CONTACT WITH 10 MILLION BACTERIA PER DAY.

Suga®Boost SASR

Salt and Scale Remover






Salt and Scale

- Electrolytes accelerate corrosion by facilitating electron transport and increasing moisture and oxygen availability.
- Some environments contain substances that inhibit easy removal of salt
- Scale deposits can be particularly difficult to remove due to poor water solubility
- Salt and scale can deposit on a wide variety of surfaces
- Effective salt and scale management requires
  - Salt removal
  - Surface protection

Introducing Suga®Boost SASR

- Unique combination of functional ingredients
  - Biodegradable salt sequestrant/chelant
  - Detergent
  - Surface protectant
  - Solvent

- Multiple use areas
  - Vehicle exteriors and undercarriage
  - Mining equipment
  - Seaside exteriors
  - Bath and shower
  - Water kettles

Scale Removal

- Dissolves ~ 20% more $CaCO_3$ on a g/g_{active} basis than leading commercial product without the use of acids.

- Chelation Value
  - Brand A = 10.82 mg of $CaCl_2$/g of surfactant
  - Suga®Boost SASR = 173.60 mg of $CaCl_2$/g of surfactant

- Suga®Boost SASR demonstrates superior chelation values which suggests that it can prevent scale from ever forming when left on surfaces

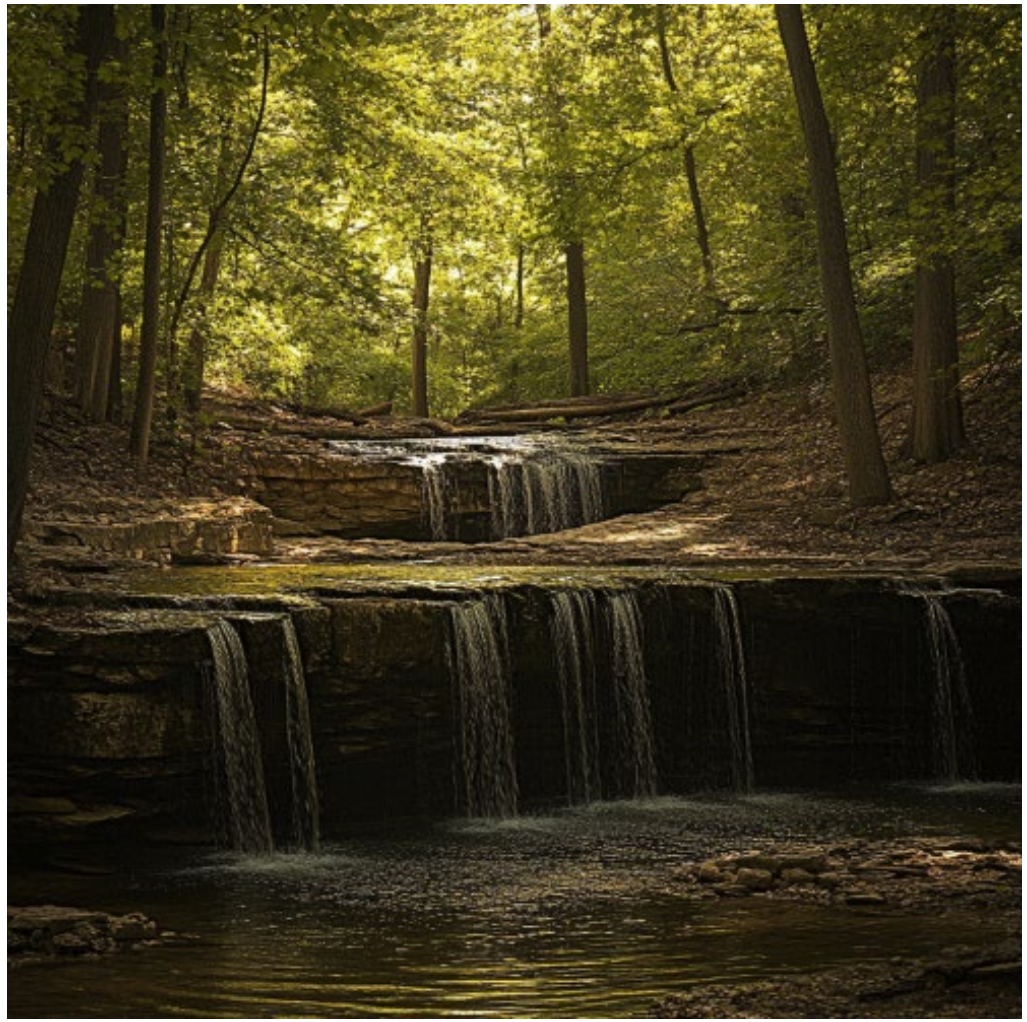
Corrosion Performance

- SugaBoost SASR offers comparable or superior corrosion resistance compared to a leading commercial salt remover

- Demonstrated safety on wide variety of metal surfaces
  - Comparable performance on Aluminum, both in liquid and headspace
  - Superior performance on Steel, both in liquid and headspace

Environmentally Friendly

- All components are readily biodegradable
- Most components have low environmental toxicity
  - One component (~5% active) with moderate chronic fish/algae toxicity per available data
- Low toxicity at typical dilution rates
- Low irritation at typical dilution rates
- All components listed or eligible for Cleangredients



Suga®Boost SASR

Description	
Common Name	Mixture of Functionalized APGs and Performance Enhancers
Global Clearances	US (TSCA), Canada (NDSL)
Physical Form	Clear liquid
Key Features	Highly **effective removal** of salt and scale Provides **protection** against future deposition Provides **corrosion resistance** on multiple metals Uses **biodegradable and biorenewable** surfactants
Suggested Applications	Vehicle exteriors and undercarriage Mining equipment Seaside exteriors Bath and shower Water kettles
Usage	500-2000:1 for outdoor spray-on applications 5-20:1 for household cleaning applications Use with or without acid, stable to pH 2 or lower

Cola®Dry CAV

Economical MSO-Free Spray Wax and Sealant






Car Wash Challenges

- MSO free formulations sometimes fail to balance beading and sheeting
  - Not enough sheeting, slow sheeting
  - Small beads don't run off quickly

- Some drying aids are hard to formulate with
  - Sensitive to MSO grades
  - Difficult to keep clear/homogeneous

- Some drying aids are loaded with quats and have poor biodegradation
  - Not good for water reclamation/municipal pre-treatment

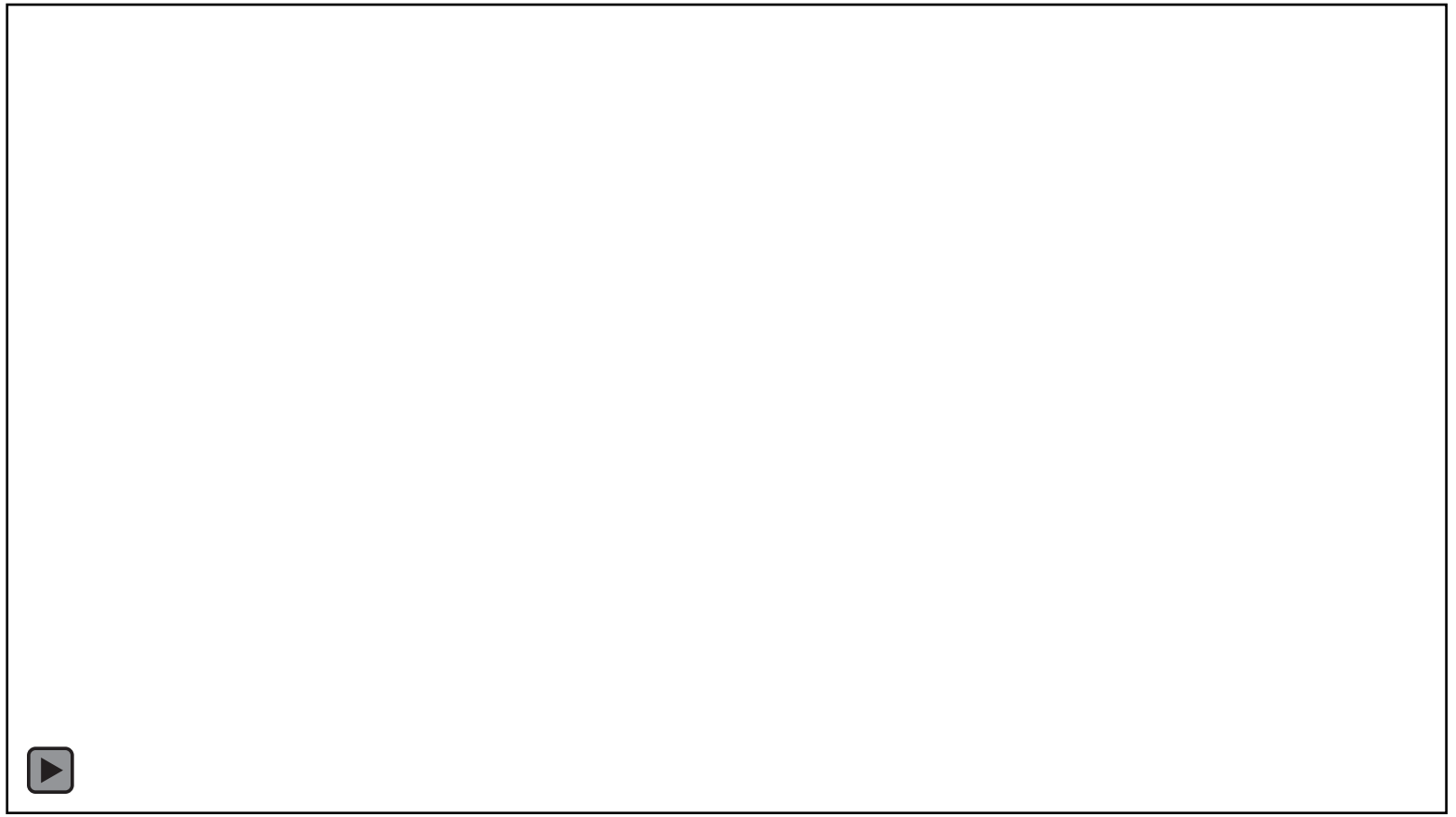
Introducing Cola®Dry CAV

- Novel combination of functional ingredients
  - Unique surfactant replaces dicoco quat
  - Trusted silicone sealant
- High performance, low cost
  - Reduced silicone, maintained performance
  - Less quat
- High efficiency
  - Use at lower rates than traditional MSO based drying aids

Demonstration

Cola®Dry CR502 – 1:500 dilution

Cola®Dry CAV – 1:500 Dilution

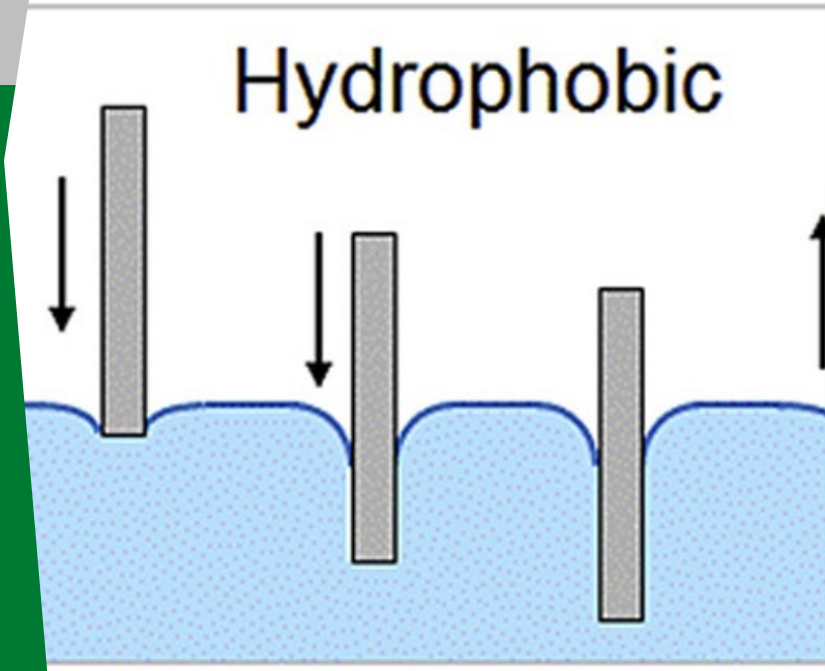


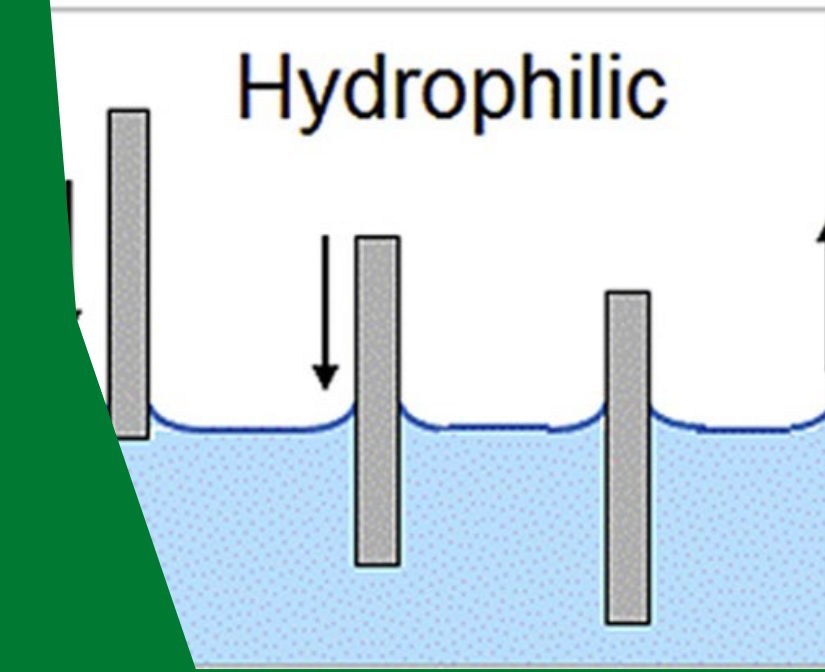
WATCH VIDEO HERE

Dynamic Contact Angle

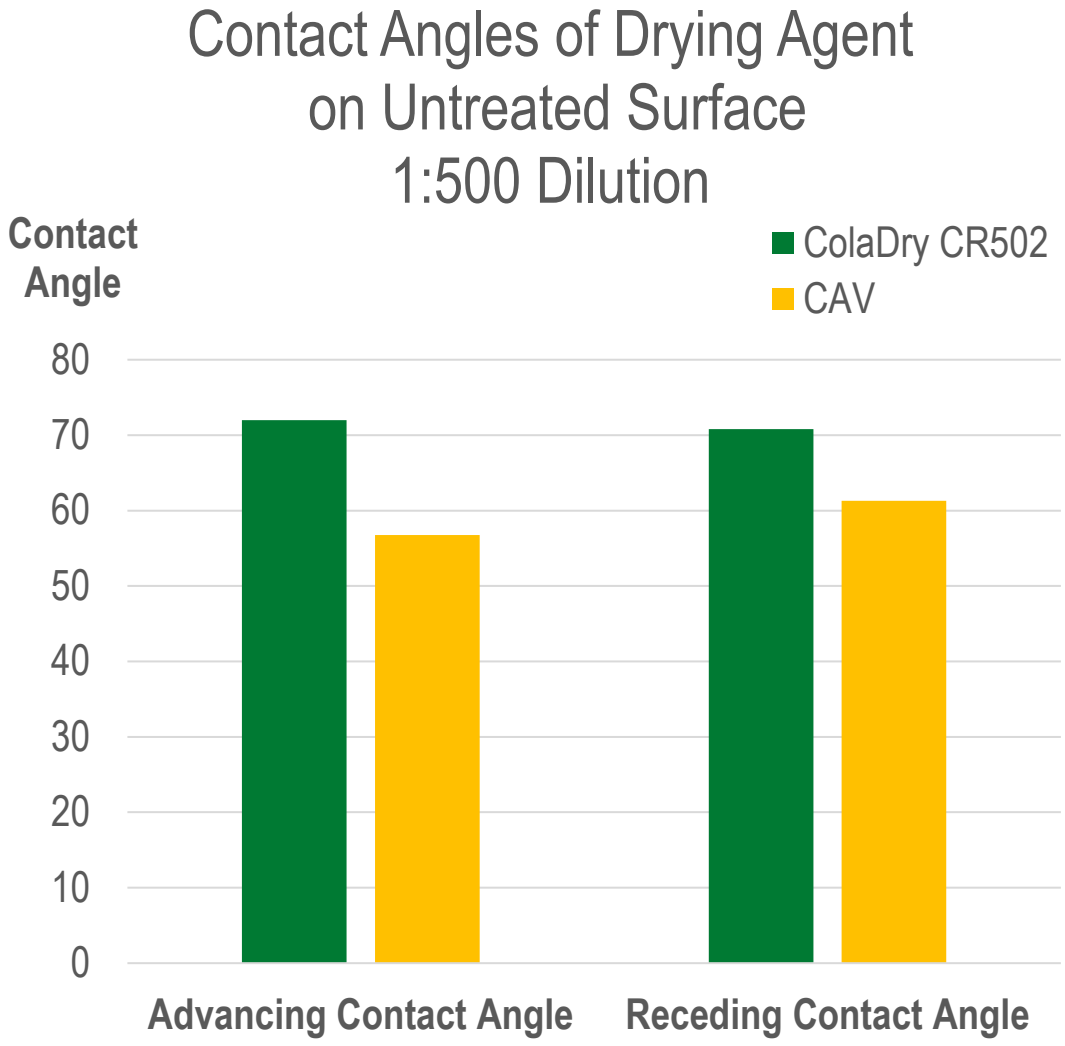
Modified Wilhelmy Method

Allows for a more comprehensive understanding of performance



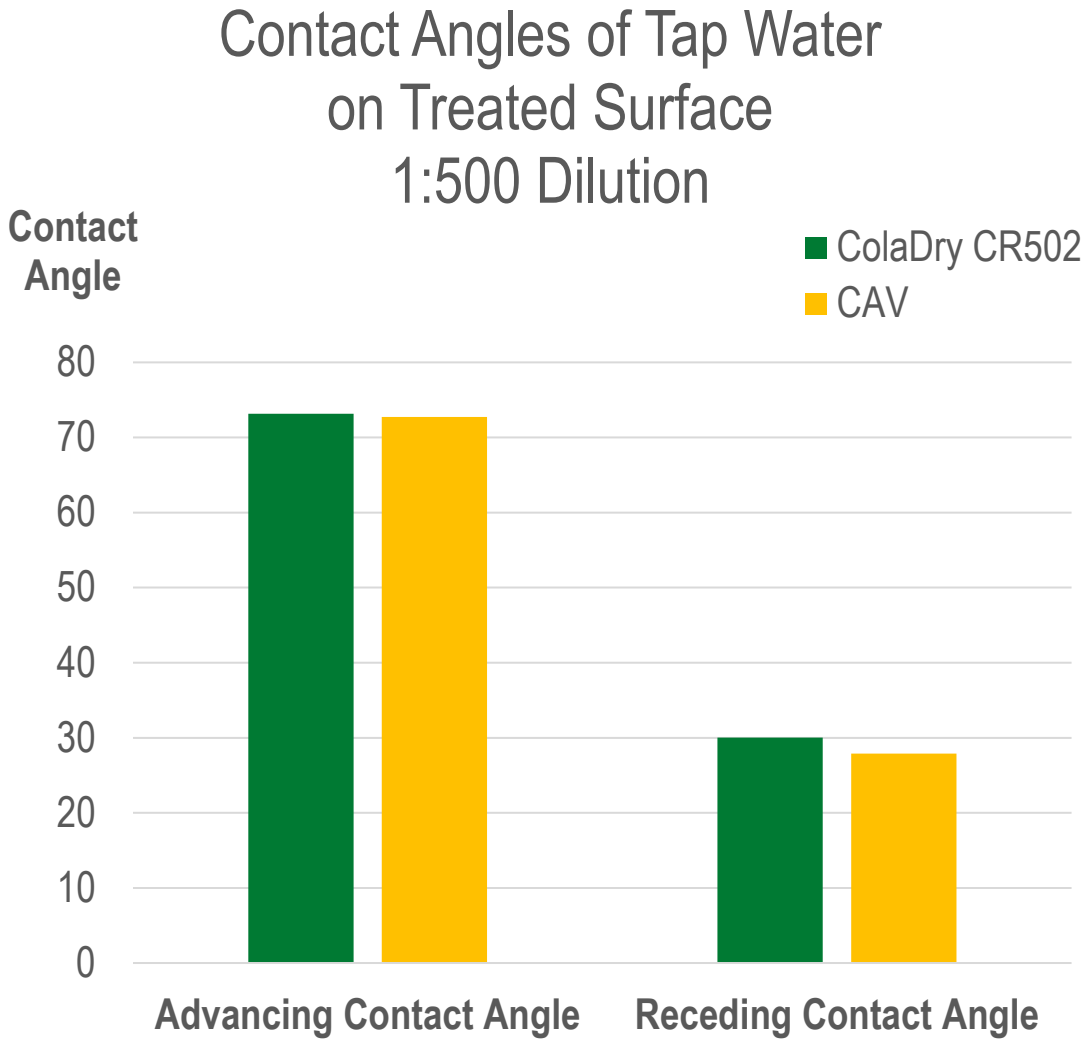


Performance – Contact Angle



- Initial action of the drying agent is shown here
- The substrate for contact angle measurements is glass and is analogous to other car surfaces
- The car hood images show the real performance.

Performance – Contact Angle



- Performance of the product during a tap water rinse.
- Virtually no difference can be demonstrated

Cola®Dry CAV All-In-One Applications (via Direct Dilution or Formulation)

APPLICATIONS	APPLICATIONS METHODS
Ceramic Sealant	Direct dilution 500:1, or 8 ml / car
Total Body Protectant	Direct Dilution 500-1000 : 1, or 4-8 ml/ car
MSO-Free Drying Agent or Clearcoat	1500-2500 : 1 with a dilution pump or 1.5-3 ml / car
Windshield Rain-X® Effect	5-10% for hand wipe, 1-2% in windshield washer
Wipe-N-Shine / Waterless Car Wash	Dilution 500-2000 to 1
Tire Dressing (auto or hand)	Use *AS IS* *Thickened with Hydroxypropyl Methylcellulose*
Hand Finish	25-30%

Cola®Dry CAV Ceramic Sealant as MSO-Free Drying Agents (Cross Reference Chart with MSO-Based)

MSO Based Drying Agents	100%	80%	50%	40%	30%	20%
ColaDry CAV	50-50%	40-45%	25-30%	20-25%	15-20%	10-15%
Dilution Ratios (up to)	2000:1	1600:1	1000:1	800:1	600:1	400:1
Average Usage (ml / car)	2-4	2.5-5	4-8	5-10	6.5-13	10-20

- % active indicates total concentration of components other than water
- In general, use half of the concentration of CAV to replace MSO or OFS based drying agents

Cola®Dry CAV

Description	
Common Name	Mixture of Silicone Polymer and Zwitterionic Surfactant
Global Clearances	Global (including REACH)
Physical Form	Clear liquid
Key Features	**Easy to use**, ready to dilute drying aid Provides **"ceramic"** finish **Increased sheeting** vs other MSO free drying aids – improved balance **Reduced quat, more biodegradable** than our previous ceramic drying aid **Higher biobased** content vs previous
Suggested Applications	Ceramic Sealant Total Body Protectant MSO-free Drying Aid Tire Dressing
Usage	Per use (prior slides) to 2500:1

Your Questions?

Thanks!

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https://colonialchem.com – Product Literature