



# Emulsifiers & Acid Rinses

Webinar White Paper





# Emulsifiers & Acid Rinses

Enhance your cleaning efficiency

## IS WATER A GOOD RINSE AGENT

- The surface tension of water is more than 3 times higher than oily grime
- Water's poor wetting ability prevents it from penetrating into the middle of the carpet yarn.
- Hard water salts, hinder the rinse water from mixing with the prespray/soil residues.
- The high surface tension of water, causes it to dry in little droplets instead of spreading evenly over the substrate (called sheeting). This droplet formation makes drying significantly slower.

### Rinse Aid

- The poor performance of water as a rinsing solution is well known.
- Dishwasher manufacturers have always recommended using a rinse aid to:
- Prevent water spots on glassware
- Improve drying speed
- Rinse the dishwashing detergent and soiling from crockery and cutlery

### Rinse / Extract Agents

aka Emulsifiers

Significantly reduce water tension and neutralise hard water ions to turn water into a high-performance rinsing agent.



## WOOL VS WATER TENSION

Watch how a wool fibre reacts to water. Then see how it changes when one drop of liquid emulsifier is added to the water - a simple demonstration of why emulsifiers are important.

## ACTICHEM EMULSIFIERS & ACID RINSES

Rinse Pro can be used on all types of fabrics and fibres including synthetic, wool area rugs and all water-cleanable upholstery. Emulsifier Plus and Extracta Pro should however only be used on synthetic fibres. The benefit of Emulsifier Plus and Extracta Pro is that they provide powerful cleaning action and are very economical to use.

On the other hand, Rinse Pro has the advantage of being suitable for all types of fibres, providing excellent cleaning action, inhibiting browning and colour bleeding on wool and delicate fibres, and leaving fibres in a stable condition for applying protectors.

## THE KEY FACTORS THAT DECIDE WHETHER TO USE AN EMULSIFIER OR ACID RINSE.

### 1. Fibre Type

Delicate Fibres: Acid rinse - delicate/natural fibres must be left in an acidic state to prevent browning and stabilize acid dyes.

Synthetic Carpets: Both emulsifiers and acid rinses can be used, however emulsifiers provide better cleaning action.

### 2. Other Considerations

Protectors: Acid Rinse – carpet & fabric protectors bond better to a fibre which is rinsed with an acidic solution.

Heavy Soiling: Emulsifiers - Emulsifiers better support the prespray and have more cleaning power.

## THE FUNCTION OF EXTRACTION IN THE STEAM CLEANING PROCESS

Carpet cleaners use emulsifiers and acid rinses during the extraction step. It should be remembered that the extraction step should not essentially be regarded as a cleaning step but as a rinsing step. (Although due to the chemical nature of emulsifiers, extra cleaning action is found in this rinsing step).

As we know, water on its own is a very poor rinsing agent because of its high surface tension and the presence of hard water ions. To convert the rinse water into an effective rinsing agent we add a small amount of an alkaline in-tank emulsifier or acid rinse.

### WHY USE AN EMULSIFIER?

- **Residue Management:** Emulsifiers help rinse and suspend detergent/soil residues for easy removal. The residues left are non-sticky, non-toxic, and easily vacuumed away, preventing re-soiling.
- **Time-saving:** Emulsifiers can serve as both a cleaner and a rinse agent, often eliminating the need for prespraying in lightly soiled areas. This reduces the time, effort, and chemicals needed for cleaning.
- **Faster Drying:** Using an emulsifier requires less water and effectively removes detergent residues, leading to quicker carpet drying times.
- **Cost-Effective:** The cost of using an emulsifier is minimal, often less than 1% of the total job cost. This investment leads to savings on labor, fewer callbacks, and higher customer satisfaction due to faster drying and better cleaning results.

## FUNCTION OF AN EMULSIFIER

An emulsifier with a ready-to-use pH of 9.5 to 10 will leave carpets with a pH around 8.5. It dramatically reduces water tension and neutralises hard water ions, providing exceptional rinsing action while also offering significant cleaning ability. This makes it an excellent backup for presprays and ideal for cleaning low-traffic areas without prespray. Emulsifiers are used at concentrations of 1:800 to 1:1200 for powders and 1:400 to 1:800 for liquids, and they are suitable for use on all synthetic carpets.

## FUNCTION OF AN ACID RINSE

Acid rinses, with a pH of 4 to 5, leave carpets slightly acidic (pH 5.5 to 6.5), neutralising alkaline prespray residues and stabilising fibers, especially wool. However, traditional acid rinses offer minimal cleaning power and primarily remove prespray residues without addressing deeper soiling, especially on synthetic carpets. Rinse Pro, with its advanced formulation, overcomes these limitations by combining the neutralising benefits of an acid rinse with powerful soil removal capabilities, making it a superior choice for both wool and synthetic fibers.

### Benefits Of Neutralising Carpets With An Acid Rinse.

Neutralising carpets and upholstery with an acid rinse after cleaning offers several advantages:

- Faster drying due to neutralized residues
- The carpet will be softer to the hand.
- Reduced risk of rapid re-soiling,
- Better fiber preparation for protector application (the protector will bond better).
- The carpet will be less likely to brown or bleed, as it stabilises dyes and prevents browning.

**The extraction step should not be regarded as a cleaning step – but as a rinsing step**

## FURTHER RESOURCES

- Knowledge Centre
- Webinar Replay
- Emulsifier Plus PDS
- Extracta Pro PDS
- Rinse Pro PDS



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