



## E-Bulletin

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### Encapsulation Cleaning



Encapsulation cleaning products do not take the place of extraction cleaning, but are a useful means of freshening carpet appearance between scheduled deep-cleanings or for areas that are never closed to traffic, like airports and hospitals.

Encapsulation technology is really just the next extension of the "Minimum Residue, Maximum Cleaning" philosophy. Let's talk a little about the history of detergent chemistry that has led to the development of encapsulation cleaning: Forty years ago, when the carpet cleaning industry was in its infancy, carpet was cleaned with soap-based shampoos and shampoo machines with rotating brushes.

They improved the carpet's appearance, but what they put down, they left there, along with the soil. So the carpet really wasn't any cleaner. The soil was less visible, since it was spread out evenly and forced deeper. Plus, now there was soap in the carpet as well as the soil. This soap residue was sticky when it dried and attracted soil, causing the carpet to re-soil faster each time it was cleaned. The carpet cleaning industry has been trying to live down this start ever since. The solution to this residue problem has two parts. The first part was to leave less residue behind.

When extraction cleaning was introduced, it reduced the amount of residue by as much as 90%, since the water and detergent was extracted from the carpet along with the soil. As extraction technology continues to improve, this amount of residue has steadily become less and less, also. The second part of solving the residue problem was changing the characteristics of what small amount of residue was left, so that it did not attract soil.

The most important change to cleaning products was the introduction of surfactant based cleaning products to replace soaps. Soaps are made from natural oils, animal fat or plant oils - they dry sticky. Even if it is only 10% of the residue that was once left, the carpets still attracted soil faster than when they were new. Surfactants can be engineered from their base chemicals to have whatever attributes are best for the task.

No reputable carpet cleaning product manufacturer has produced soap-based products for close to thirty years! Over the last twenty to thirty years, surfactant suppliers have created detergents that are less and less likely to attract soil, and they are continuing to find new innovations in surfactant and polymer technology. Product residues have changed over the years from having sticky, gummy residue that never entirely dried up, to waxy and dry powdery residue that can be vacuumed up with the next vacuuming.

One of the most recent developments in the surfactant and detergent industry is the addition of "embrittling agents" to the surfactants. Products that include embrittling agents leave a residue that is brittle, dry and crystalline. Once dry, the surfactant crystals flake easily off of the carpet fibres from the mild agitation of foot traffic and are vacuumed up during the next scheduled vacuuming.

This advancement led to the introduction of the current crop of "Encapsulation Cleaning" products such as Prochem's new Procaps, but you will also see embrittling and encapsulation technology used in other Prochem cleaning agents such as "bonnet" cleaners, spotters, extraction detergents and rinses.

Currently other Prochem Europe products that use embrittling technology to give the best residue characteristics include B122 Neutral Pro-Spotter, B110 Bonnet-Buffer®, B106 Fine Fabric Detergent and B105 Fibre Shampoo.

## S745 Procaps



Procaps is formulated with superior soil release agents and advanced polymer technology to lift and encapsulate soil, spots and stains.

Procaps utilizes not just one, but three encapsulation ingredients, each with an attraction to a certain soil types. Most other competitive products contain only one of the ingredients in Procaps. Each of its ingredients attaches to the soils, then attach to one another to form the encapsulating molecule that then dries with the soil inside of it. (Prochem has also developed these ingredients to dry very brittle and not adhere to carpet fibres).

The result is more soil removed and easier vacuum removal of dried encapsulate. While this process is better than other products in the industry, the carpet is still vulnerable to soils that are tracked in or spilled the very next day.

That's where Procaps fluorochemical enhancer comes in. It provides soil repellency and easier spot clean up, just like a protector would. For users of interim products who want a cleaner looking carpet longer, Procaps is the answer.

Its solution is a rinse free formula that dries quickly to a dry crystalline finish that is easily vacuumed away. Procaps is safe for use on wool, wool-mix and stain-resistant carpets (subject to pre-testing).

It leaves carpet clean and dry with enhanced soil resistance in approximately 20 minutes. Clear liquid with tropical lemon fragrance. Dilution is 1 part to 16 parts water with a pH of 8 and the product comes in cases of 2 x 5L.

Further information is available on the Carpet Maintenance Products page of the Prochem Europe Website.