



INCORPORATED

4550 Jackson Street Denver, CO 80216
FAX (303) 355-3516 / (800) 447-8326
Internet - <http://www.steamway.com>

1997 Technical Bulletins

For More Information, Contact Steam Way International at (303) 355-3566

TB9750 - January 1997

THE OLEFINS ARE AMONGST US.

Professional cleaners face many challenges and opportunities each day in meeting the needs of their customers. As cleaning equipment, chemical technology, and training has progressed through the years, cleaners have become more and more confident in their ability to restoratively clean almost any synthetic carpet. In the past few years however, the proliferation of lightly colored olefin carpets into the residential marketplace has brought about a new kind of challenge. Couple that with Olefin's increasing marketshare into high traffic and oil-based soil contaminated commercial settings, and you have a strong recipe for a new headache.

Olefin (generally described as polypropylene) as a carpet fiber has two characteristics that can contribute to it being harder to clean than other synthetic carpets. First, it is lipophilic, which means it loves to allow oil based soiling to soak into the fiber itself. Secondly, it has poor to fair resiliency, meaning its ability to spring back to its original position when subjected to foot traffic and wear is reduced rapidly over time. Combine these factors with lighter colored residential carpets with a high loop berber style and pizza restaurants installing olefin, you've got a complicated mess in the works.

Traditionally, professional cleaners when forced with a dirty olefin carpet, have simply used "stronger" traffic lane cleaners in combination with aggressive agitation to try to clean them. Results varied. As Olefin has gained marketshare, suppliers have been faced with more questions about better ways to clean olefin. The conventional response was to tell them to use "stronger" traffic lane cleaners and more "dwell time". Some responded with simply more of the same - higher pH's, more enzymes, more solvents. Some companies have even brought out products specifically designed to address the issue of cleaning olefins. The result has often been carpet cleaning chemicals that resemble formulations more typical of wall cleaning chemicals and pressure washing degreasers than carpet cleaning solutions.

What has somewhat been overlooked in all of this is one important point. A severely soiled olefin carpet often times has difficulty getting all of the cleaning chemistry into the fiber where the problem soil has been ground in. Basic level IICRC carpet cleaning courses teach us that olefin is the least absorbent carpet fiber to water based solutions. If the olefin fiber repels your traffic lane cleaner from getting to problematic ground-in soiling, it doesn't matter how strong the formulation is, it still may not do the trick.

Perhaps one answer lies in going back to a basic understanding of cleaning technology. Most carpet cleaning chemicals are based in surfactant technology. But as carpet cleaning has more and more rightly focused on low residue cleaning, surfactant levels have been minimized in many cases. Much of the technology focus has been on citrus solvents, enzymes, and other things. When you look at a severely soiled olefin carpet, you realize it has been soiled with the same soiling elements as would a nylon carpet. The oil based soiling that makes cleaning olefins difficult is being effectively dislodged and dissolved when we are cleaning nylon. The problem may not lie in the oil based soiling itself. Existing solvent, surfactant, and enzyme technology is removing those same oil based soils from nylon. One strategy shift that should be considered is to focus once again on surfactant technology. A symbiotic blend of several different surfactants may allow our traffic lane cleaner to penetrate the olefin fiber better, thus allowing normal solvent or enzyme technology to dissolve and dislodge the oil based soiling. This focus on surfactant technology will result in the formulation of products specifically designed for olefin fibers that use blends of surfactants to help in penetration of the nylon fiber. Once the surface tension has changed to allow the cleaning solvents, detergents and alkaline builders in, they'll do a great job in breaking down, dislodging and dissolving the oil based soiling in the olefin carpet.

This shift in focus has brought about the introduction of traffic lane cleaners that specifically are designed for olefin fibers. They can be safely used on nylon and polyester also. Because of the higher surfactant levels, precise rinsing and extraction should be applied to make sure our cleaning is as low residue as possible.

In the case of cleaning olefins, perhaps we should focus on better instead of more.