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## 1994 Technical Bulletins

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### **DEODORIZING SOLUTIONS FOR WATER DAMAGE RESTORATION ARE DEVELOPING RAPIDLY**

For years, our industry has depended mainly on the use of quaternary ammonium chloride based deodorizers and disinfectants for use in the prevention and treatment of mildew caused odors. Fabrics that have been subjected to water damage usually exhibit signs and symptoms of odor and possible structural damage within 24 to 48 hours of the water damage occurring.

A few years back, the introduction of stain resistant carpet to the residential market first struck a blow to the use of quaternary solutions when the cationic nature of the "quats" were found to damage the anionic dye blockers associated with these stain resistant carpets. Although common sense prevailed and the industry has come to grips with when and when not to use quaternary solutions on water damaged stain resistant carpets, this still left an issue of some confusion surrounding the disinfection and deodorization of stain resistant carpets.

In 1993, the Institute of Inspection, Cleaning, and Restoration Certification (IICRC) working in conjunction with the United States Environmental Protection Agency and Research Triangle Institute issued the industry's first comprehensive working paper dealing with the role of the restorer as it relates to sewage damage. This discussion included a detailed analysis of disinfecting solution options that questioned the effectiveness of quaternary based solutions on sewage damage contamination, since the quaternary solutions could often be rendered ineffective by large amounts of sewage damage based organic materials.

These, and other changes have brought about a greater demand for research into deodorizing solutions for water damage restoration and restorative drying that could augment the use of quaternary solutions. Since 1988, Steam Way has been working in conjunction with the laboratories at Du Pont, Union Carbide, and Dri-Eaz Products. This work brought about the beginning of answers to this complex picture. In 1989, we first saw the introduction of a product from Du Pont that provided a deodorizing solution truly compatible with stain resistant carpets. Several chemical companies within our industry formulated products with this development, which at the time was known as MasterSeries® Deodorizer. Although this solution was and is still effective on light urine and mildew odors, its formulation still did not completely answer the puzzling challenge. A short time later, Dri-Eaz products introduced a new compatible deodorizing product to the industry known as Milgo-SR®. This product was stronger than previously similar solutions and is widely used today by cleaners and restorers.

Subsequent to the release of the industry paper on sewage damage, the industry was asked to reexamine the role of active disinfecting ingredients and the future of restorative drying. Research at Steam Way was still well underway and this reexamination provided some further input.

A fine, but very important line, was also drawn between the effectiveness of deodorizing solutions and their safe use in the indoor environment. As the safety technology and training for professional cleaners and restorers developed, the information brought to the forefront in the sewage damage paper defined the highest level of effectiveness needed for innovative new solutions to water and sewage damage based problems. This study introduced solutions which could be safely and effectively used at higher concentrations only when in the hands of a trained professional restorer. Now the use of deodorizers that contained the active ingredient, glutaraldehyde, at a two percent active ingredient level, had been defined for effectiveness. This amazing solution has

been found to make an excellent solution when combined with previously known deodorizing technology. The result is a product from Steam Way known as BIO-ZAP®. There is little doubt that other companies will soon be introducing similar products. These products are effective deodorizers for odors resulting from water damage, sewage damage, pet urine and feces, and decomposing protein matters. They can be made with proper formulation to be compatible with stain resistant carpets, thus making them an across the board choice for deodorizing of all types of carpeting including wool.

In addition, these type solutions are effective on urine, especially when used as a prespray. You can spray these solutions on the carpet prior to cleaning and then allow ten to twenty minutes of dwell time. Then rinse the solution out prior to proceeding to regular carpet cleaning steps. Used as a decontamination deodorizer, these solutions can be used prior to job activities for safety reasons, during the restoration process, and following the process for fragrancing purposes. They are used in this way for water damage, sewage damage, and decomposing protein odor problems. Unlike quaternary solutions, they can be used on even large amounts of organic contamination and their active ingredient will not be rendered ineffective.

These solutions will need to be applied in a professional manner, only with adequate ventilation, and by a trained professional cleaner or restorer. Because they contain glutaraldehyde, they can become respiratory irritants when applied incorrectly. Safety considerations demand that all people and pets be kept out of the treatment area during application, and for four to six hours after application or until the carpet is completely dry.

This new technology will help meet the needs of your company. You will want to consider adding these solutions to your arsenal of effective solutions for water damage and sewage damage deodorization, as well as for pet urine contamination deodorization. Rest assured that changes in technology are keeping active, involved companies like yours on the forefront of better ways to be the best professional cleaners and restorers in the world today.

About the author:

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