



UL 2796

Standard for Sustainability for Odor Control Products

Standard for Sustainability for Odor Control Products, UL 2796

First Edition, Dated August 6, 2013

Summary of Topics

The revisions dated November 1, 2013, were issued to revise 7A.1 to add an option to evaluate efficacy by either of two methods to conduct an odor panel evaluation.

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INTRODUCTION

1 General

1.1 This Standard is designed to reduce environmental impacts by specifying criteria for:

- a) Safer chemicals and materials;
- b) Use of recycled and recyclable materials; and
- c) Minimizing pollution generated by the production, use, and disposal of these products and their packaging.

1.2 This standard establishes human health and environmental criteria for ambient odor control products, and biologically-based odor control products.

1.3 Odors are characterised by physical chemicals, such as hydrogen sulphide, methanethiol, butanoic acid or ammonia, which are dissolved in air. Thorough cleaning and removal of organic soil eventually removes the source of many odors. Some settings (e.g., hotel rooms, institutional washrooms) require faster odor control and typically remove these odors through air fresheners and sprays.

1.4 A variety of chemical odor control products are sold for use in both the consumer and institutional markets (e.g. hotels, restaurants, office buildings). Of these, there are six basic different physical types: liquids, gels, solid blocks, pellets, granules and ionizing equipment. Liquid products are marketed for use as room sprays, or for application directly to malodorous objects (e.g., garbage containers) or to floors, carpets or clothes after dilution in carpet cleaning machines, mops or in laundry machines. Gel, block and pellet products are all variations of products that are designed to be left in place, and release fragrant odors over time to counteract bad smells. Deodorizing rooms may also involve equipment such as fogging machines (spray a chemical solution throughout the space) or ionizers (expose air to a negative current and generate negative ions). Inorganic granules, such as baking soda or aluminum silicates (zeolite), are left in place to absorb odors.

1.5 There are three basic forms of odor control.

- a) The most basic form is masking and overpowering the bad odor with a more pleasant smell. The active ingredients in these products typically are alcohol, glycols, surfactants, preservatives and fragrances and propellants such as butane and propane.
- b) The second form of product uses microbial components or enzymes to break down organic soil and remove odor sources. These biologically-active products are not typically used as room deodorizers because constant contact with the soil is required to remove or break it down. Biologically-based products differ from their chemical counterparts mainly in that they degrade the organic material in soils, drain clogs and degrade oils and fats. They are also capable of removing the non-visible residues that coat surfaces and cause rapid re-soiling and odors. They contain, as their main active ingredient, microbial cultures that promote digestion of hydrocarbons, organic contaminants and other undesirable substances. Additionally, they may contain additives (e.g. surfactants, buffers) that increase their effectiveness.
- c) The third form of product is advertised as binding and capturing odor molecules through active ingredients including cyclodextrin, metazene and zinc recinoleate.