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Standard Terminology Relating To Aerosol Products¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 The terms found in this terminology relate to the nomenclature used in the aerosol industry.

2. Terminology

active ingredient—component of an aerosol formulation that produces the specific effect for which the formulation is designed.

aerosol can side seam—cans which are formed from rectangular sheets have a soldered, bonded or welded strip which joins two corresponding or matching side gill edges to form a cylinder.

aerosol packaging—pressurizing sealed containers with liquefied or compressed gases, enabling the product to self-dispense. The term “aerosol” as used here is not confined to the scientific definition (that is, a suspension of fine solid or liquid particles in air or gas).

aspirator valve—a valve in which the propellant vapor is aspirated through an orifice in the valve chamber, causing a suction effect that draws the product up the dip tube and into the valve.

auxiliary solvent—liquid material used in addition to the primary solvent. It is generally used to replace part of the primary solvent to produce a specific effect, or, as a matter of economics.

chemical attack—chemical reaction or solvent effect, causing failure or deterioration of plastic and rubber parts, organic coating, metals, or lithography involved in the completed package.

co-dispensing valve—an arrangement whereby two components of a product are separated inside the container and mixed at the time of use, when ejected through dual channels into the valve.

cold filling—the pressurizing of a container by cooling the propellant (and sometimes the product) below its boiling point and transferring it into the container before the valve is put in place. The operation is usually carried out at atmospheric pressure (that is, high pressure equipment is not needed).

compatibility—the ability of various components or an aerosol formulation to be used together without undesirable physical or chemical results.

concentrate—the product mix to which the propellant is added.

cosolvent—solvent used to improve the mutual solubility of other ingredients.

crimp—an operation that mechanically seals the valve to the container.

density—mass of a given volume of material at a specified temperature.

delivery rate—mass of mixture discharged from the dispenser per unit of time at a specified temperature, usually expressed in g/s at 80°F (26°C).

dip tube—tubing connecting the lower portion of the container or dispenser with the valve.

head space—volume in the upper portion of the dispenser not filled with liquid contents usually expressed as percent of total volume of dispenser at a specified temperature.

inert (inactive) ingredient—component of an aerosol formulation that does not contribute to the specific effect of the formulation. In some cases, it may be quite arbitrarily defined (for example with insecticides, only the propellants are considered as inert ingredients).

metering valve—a valve that delivers a definite limited amount of aerosol formulation each time the valve mechanism is operated.

nonvolatile ingredient—component of an aerosol formulation with a vapor pressure less than atmospheric pressure (14.7 psia (101 kPa) at 105°F (40.6°C)).

¹ This terminology is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.33 on Mechanical Dispensers. Originally developed by the Chemical Specialties Manufacturers Assn.

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