

HOW WELL DO YOU KNOW YOUR AEROSOL?

There is more to aerosol applications than meets the eye and understanding the differences between aerosol and non-aerosol spray is an important part of product knowledge and reducing waste.



Aerosol Spray

Propellants normally used in an aerosol spray are Propane, Butane, Isobutane or Dimethyl Ether, none of which contain CFCs. The majority of aerosol sprays no longer contain CFCs, which are thought to play a significant role in ozone depletion.

Propellants are normally in a gaseous state at room temperature and become liquefied under pressure; for example, within an aerosol spray can. When the button on top of an aerosol is depressed, a valve opens and the mixture is able to leave the can. The liquid propellant becomes a gas and helps to break the spray into droplets. In foam, the liquefied gas forms bubbles, which make the product 'grow' once it is outside the container. The liquid propellant is also a quick-drying solvent. The actual amount of propellant found in an aerosol container varies depending on the product; a higher percentage for fine sprays, lower for foam.

Advantages

- May produce a finer, regular spray and even coverage.

Disadvantages

- Dispenser is not refillable and a smaller amount of pure product is applied due to the amount of propellant gas contained in the mixture. (Aerosol cans are a Universal Waste, and therefore must be managed in accordance with 40 CFR, part 273 and must be managed as such on Fort Knox)
- Aerosols may be harmful; familiarize yourself with the potential dangers by reading the product Safety Data Sheet (SDS):
- Must be stored as a "flammable" material.
- Protect from sunlight and do not expose to temperatures exceeding 50°C (122°F)
- Do not puncture or burn, even after use.
- Do not spray near an open flame or any incandescent material. Keep away from sources of ignition – no smoking.
- Propellant or nozzle failure.
- Use only as directed. Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal



Non-Aerosol Pump Spray

Pump sprays do not require propellants; consequently this type of dispenser contains only the pure active ingredient, which is sprayed from the bottle by a mechanical pumping action. The valve opening, or nozzle, determines the size of particles on exit.

Advantages

- Pump action dispensers can be refilled. This represents a potential savings for Units/Organizations and reduces waste.
- No propellant means more room for active ingredients hence pump dispensers can last for longer.
- Consistent container performance.

Disadvantages

- The spray is not as fine as an aerosol and may deliver a wetter, irregular distribution, and may not be appropriate for all applications.