

Aerosol Product Technology and Current Regulatory Definitions

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Meeting on Bag-on-Valve Product Method of Sale

National Institute of Standards and Technology, Gaithersburg, MD



Representing Household & Institutional Products

Aerosol - Air Care - Cleaners - Polishes
Automotive Care - Antimicrobial - Pest Management

CSPA Aerosol Products Division

- CSPA Formed in 1914 – 100th Anniversary!
- APD One of Seven CSPA Divisions
- APD Formed in 1949
- > 150 APD Member Companies
 - Product Manufacturers
 - Packaging and Ingredient Suppliers
 - Consultants and Testing Laboratories

How Aerosol Products Began

- The Need – Insect Control for the Military in WW II
- The Solution – A Pressurized Spray Pesticide
- The Means – A Field Refillable, Low Cost Dispenser
- The Result – The First Industrial Aerosol Can (1946)
- Non-Refillable Commercial Aerosol Products in Late 1940s



Types of Pressurized Product Technology - 2014

- **Traditional Aerosol Products**
 - Pressurized for Continuous Delivery
 - Can Use Liquified or Compressed Gas Propellant
 - Delivers Liquid Spray, Liquid Stream, Foam, Dry, or Dry Powder
 - Propellant Expelled with Contents
- **Barrier-Pack Pressurized Products**
 - Bag-on-Valve, Piston Cans, etc.
 - Can Use Liquified or Compressed Gas Propellant
 - Delivers Liquid Spray, Liquid Stream, Semi-Solid, or Foaming Gel
 - Propellant NOT Expelled with Contents
- **Non-Propellant Spray Products**
 - Bladder-in-Can, Pump Pressurized Sprays, etc.

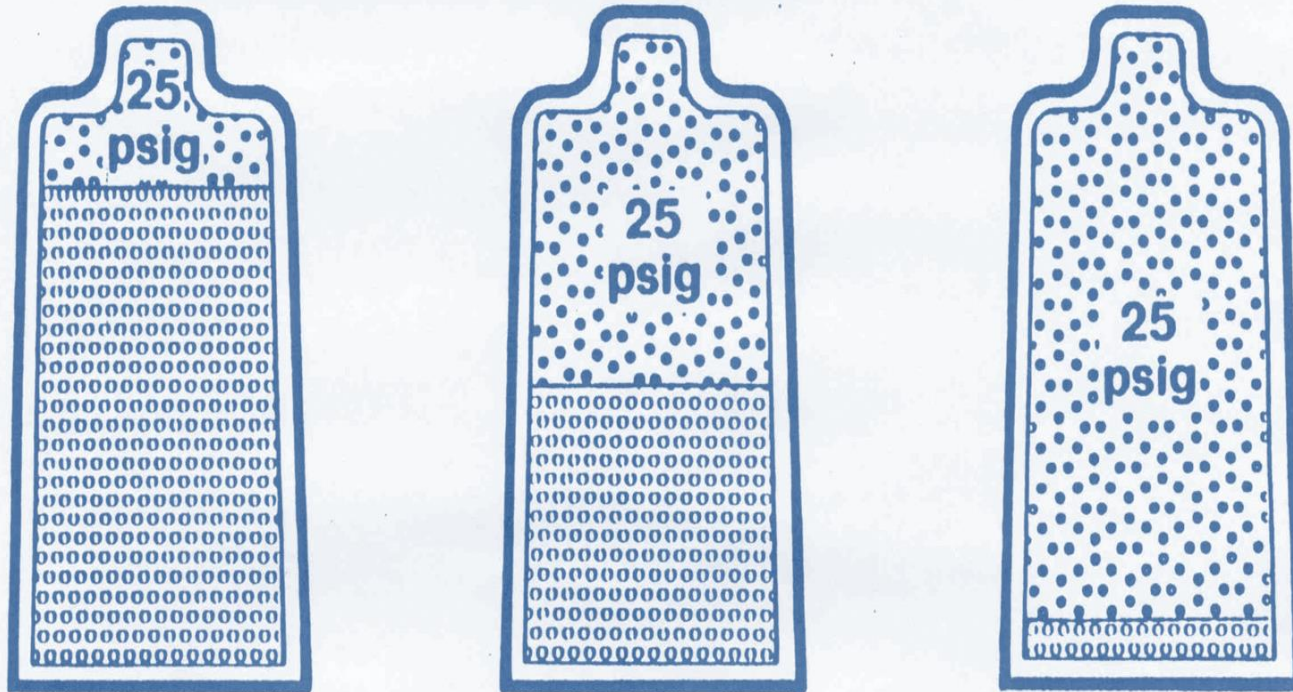
Pressurized Product Benefits

- Empty Containers Recyclable
- Efficiency in Delivery and Application
- Hermetically Sealed
- Long Shelf Life
- Effective and Consistent Performance
- Wide Variety of Delivery Options

Product Propellants

- Liquified Propellant Options
 - Hydrocarbon Blends
 - Dimethyl Ether
 - Hydrofluorocarbons/Hydrofluoroolefins
- Compressed Gas Propellant Options
 - Carbon Dioxide
 - Nitrogen, Air
 - Nitrous Oxide
- All Have Unique Capabilities and Limitations

PRODUCT WITH A LIQUIFIED GAS



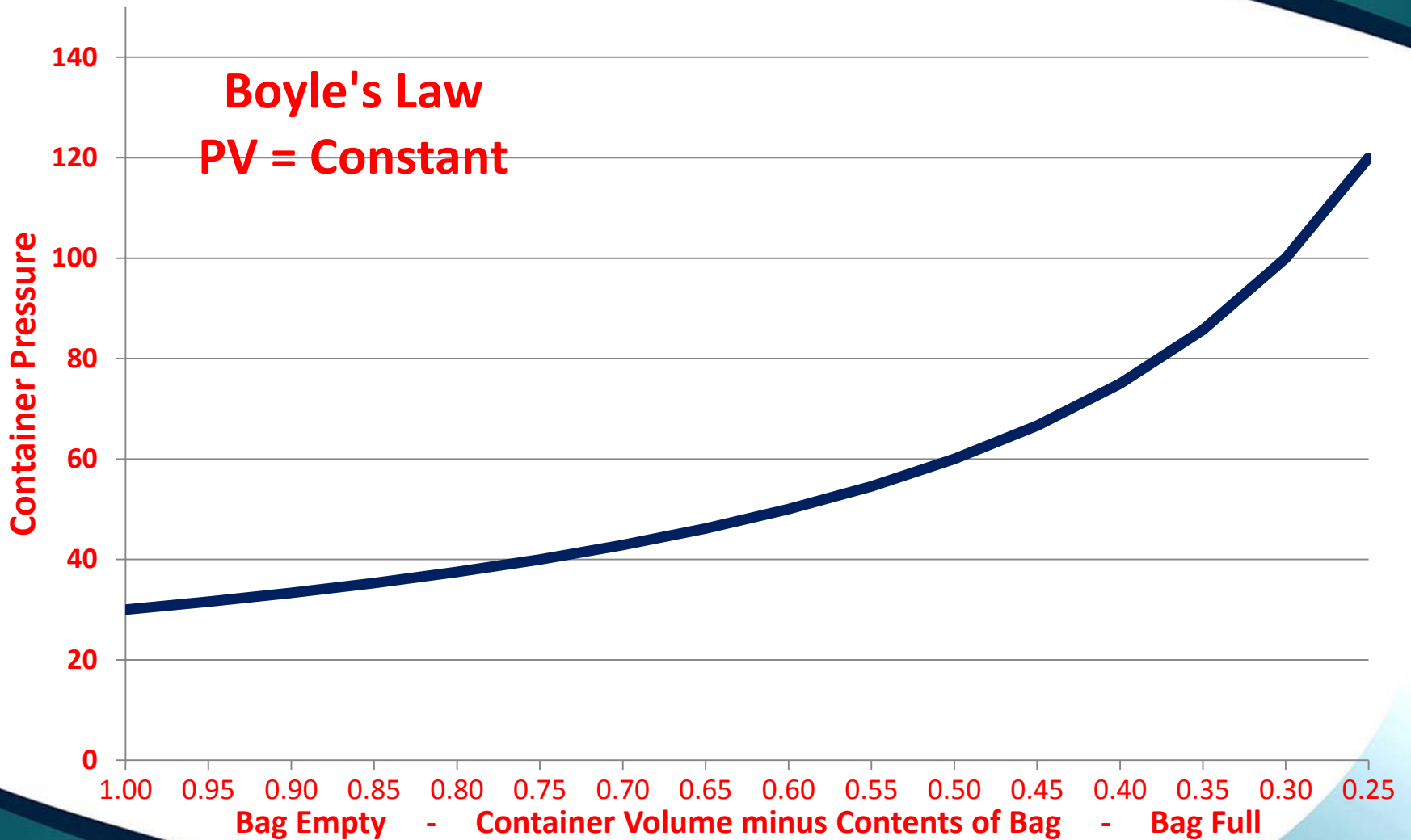
With a liquefied gas, the pressure in a product formulation will remain constant as the product is used.

PRODUCT WITH A COMPRESSED OR SOLUBLE GAS

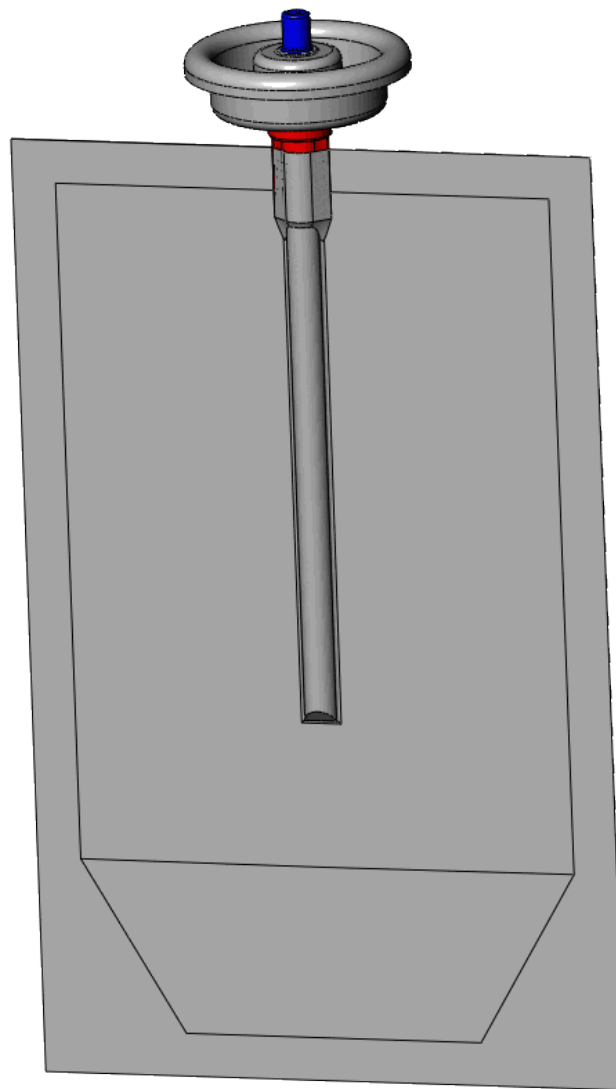
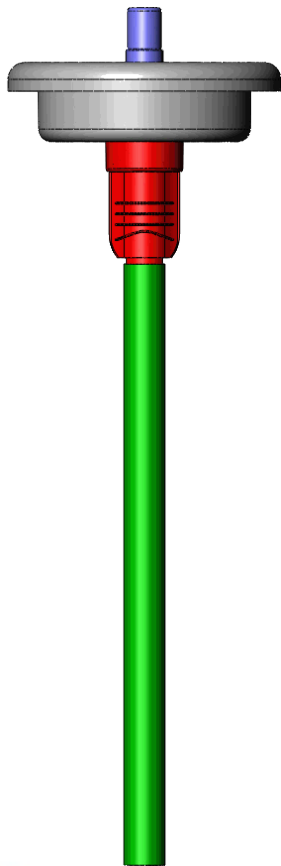


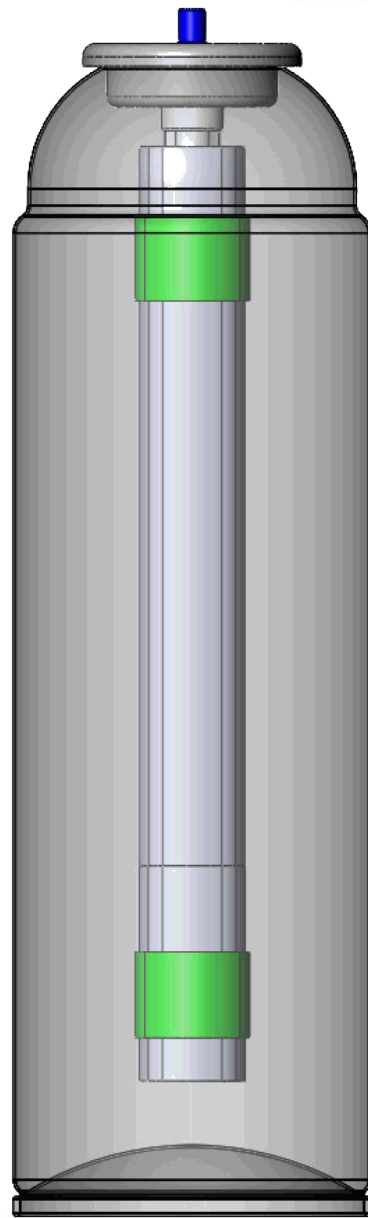
With a compressed or soluble gas, the pressure in the formulation will not remain constant as the product is used.

Barrier Pack Pressurized Product



BOV Package





**BOV Package
Ready for
Gassing
&
Filling**



What Products Are BOV?

- BOV and Other Barrier Packages
 - Use the Same Types of Outer Containers
 - Use Similar Types of Valves
 - Similarly Allow for Continuous Delivery
- Increasingly Used for Liquid Sprays, Foaming Gels, Caulks, etc.
 - Skin Sprays, Air Fresheners, Pet Products, etc.

Current Regulatory Definitions of Aerosol and Similar Pressurized Products

- Glossary – CSPA Aerosol Guide 9th Edition
- USA Federal Agencies: CPSC, DOT, EPA, FTC, FDA, NIST, OSHA
- NFPA and Related Fire Codes
- State Consumer Product VOC Regulations
- International Laws and Regulations

CSPA Member Position on Pressurized Product Method of Sale

- Net Weight is Acceptable for Traditional Aerosol Products
 - Net Volume Should Remain Allowable on Back Labels
- Policy Must be Consistent Across States
- Policy Should be Consistent Across Agencies
 - Same for Consumer and Institutional/Industrial
 - Same for Home, Auto, Pest and Personal Products
- CSPA Discussion on BOV Definitional Issues Continues

Thank You

Questions & Comments

Presented by:

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