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## AS2278.1:2022 Updates & Clarification



# Outline

**Choosing the correct can rating for your product**

**Understanding the provisions for an alternative to the waterbath**

# Choosing The Correct Can Rating For Your Product

## AS2278.1-2022

### 2 Requirements For Empty Aerosol Dispensers

**2.2** Hydraulic test Aerosol dispensers shall be able to withstand a hydraulic test pressure applied for 25 s at test conditions ( $20 \pm 5^{\circ} \text{C}$ ) (***Distort Or Can Pressure Rating***)

(a) for aerosol dispensers filled at a pressure of less than 0.67 Mpa (6.7 bar) at  $50^{\circ} \text{C}$ , equal to at least 1 MPa (10 bar); and

**(b) for aerosol dispensers filled at a pressure equal to or greater than 0.67 Mpa (6.7 bar) at  $50^{\circ} \text{C}$ , 50 % higher than the internal pressure at  $50^{\circ} \text{C}$ .**

- The required “Can Pressure Rating” **must be determined by the filler** & specified to Can Manufacturer or Supplier at time of product development or order
- Cans are typically designed to meet 12, 15 & 18 Bar (Distort) Pressure Ratings

## Can Pressure Performance

Hydraulic Test (Distort) & Burst Testing is undertaken during can production to ensure finished product meets the **specified pressure rating** for that product

Factors that determine or Influence Can Pressure rating typically include :

3pc Tin Plate Cans	Monoblock Aluminium Cans
Body Plate Thickness & Temper	Aluminium Grade
Components (Tops & Ends) Shape, Plate Thickness & Temper	Can Wall & Base Material Thickness
Seam & Weld Integrity	Can Shape

# Understanding The Provisions For An Alternative To The Waterbath

## 3.6 Leak-proofness test

### 3.6.1 General

Except as provided in Clause 3.6.3 (*Heat Sensitive Products*), all filled aerosol dispensers shall be subjected to a test performed in a water bath **or an alternative method**, both of which are detailed in the UN Recommendations on the Transport of Dangerous Goods—Model Regulations

#### **Alternative Method :**

- A Quality System that ensures all aerosols that leak or are deformed are rejected and not offered for sale.
- **Pressure testing of all empty aerosols at least at two-third of the design pressure of the aerosol container to ensure that they do not deform when filled and leak at a rate less than  $3.3 \times 10^{-2}$  mbar.l.s<sup>-1</sup>.**
- Each filled aerosol dispenser shall be weighed to detect and reject overfilled aerosol dispensers.
- Leak testing of all filled aerosols to detect that they do not leak at a rate greater than  $2.0 \times 10^{-3}$  mbar.l.s<sup>-1</sup> at 20 °C.

# What Does This Mean For The Can Supplier

- Pressure testing of all empty aerosols at least at two-third of the design pressure of the aerosol container to ensure that they do not deform when filled and leak at a rate less than  $3.3 \times 10^{-2}$  mbar.l.s<sup>-1</sup>

Design Pressure	Required Can Test Pressure
12 Bar	8 Bar
15 Bar ( <i>Current Tinplate Maximum</i> )	10 Bar
18 Bar	12 bar

- Typical In-Line Can Line Pressure & Leak Testing Systems

Can	Existing Test Capability & Technology
Tin Plate	Wilco In-Line Leak Tester 8-10 Bar
Aluminium	No Inline pressure testing
	Leak detection typically low pressure “Hole Detection” or vision systems

**Verify Your Can Suppliers Test Capabilities to ensure compliance**