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Australian Standard 2278—1979

METAL AEROSOL CONTAINERS
CLASSIFICATION, FILLING AND TESTING

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

THE FOLLOWING SCIENTIFIC, INDUSTRIAL, CONSUMER AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Aerosol Association of Australia

Australian Federation of Consumer Organizations

Australian Retailers Association

Confederation of Australian Industry

Department of Health Canberra

Department of Labour and Industry, New South Wales

Department of Labour and Industry, Victoria

Department of Labour Relations, Queensland

Department of Science and the Environment

Packaging Council of Australia

Railways of Australia Committee

Royal Australian Chemical Institute

This standard, prepared by Committee PK/13, Aerosol Containers, was approved by the Packaging Standards Board on behalf of the Council of the Standards Association of Australia on 6 April 1979, and was published on 1 July 1979.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for public review as DR 78014.

AUSTRALIAN STANDARD

METAL AEROSOL CONTAINERS—CLASSIFICATION, FILLING AND TESTING

AS 2278—1979

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PREFACE

This standard was prepared by the Association's Committee on Aerosol Containers, under the direction of the Packaging Standards Board, as the revision of AS Z42—1967, which it accordingly supersedes.

The revision was undertaken both to metricate the standard and to incorporate various amendments that have previously been published. The increasing use of larger sized aerosol containers required that the standard deal with containers of brim-full capacities up to 1400 mL (previously 820 mL).

Any filled aerosol container may be potentially hazardous if it is overfilled, overpressurized or subjected to elevated temperatures. Consequently, during the revision of the standard, greater emphasis has been placed on the testing requirements of filled aerosol containers, and, where necessary, additional testing procedures have been included. An important additional requirement is that filled aerosol containers must not become liquid-full at 85°C.

In addition, the methods of testing unfilled aerosol containers have been revised to include more information concerning pass or fail requirements.

The flammability of the product to be dispensed is also an important safety consideration. A method for determining flame propagation characteristics has been included.

This standard makes reference to the following Australian standards:

AS 1216 Code of Practice for Safe Handling of Dangerous Goods
Part 1—Classification and Class Labels for Dangerous Goods

AS 1517 Tinplate and Blackplate
Part 1—Sheet
Part 2—Coil

AS 1866 Wrought Aluminium and Aluminium Alloy Drawn Wire, Rod, Bar and Strip for General Engineering Purposes

AS Z47 Glossary of Packaging Terms*

*Under revision.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard for METAL AEROSOL CONTAINERS—CLASSIFICATION, FILLING AND TESTING

SECTION 1. SCOPE AND GENERAL REQUIREMENTS

1.1 SCOPE. This standard sets out requirements for non-refillable metal aerosol containers of up to 1400 mL brim-full capacity and 85 mm internal diameter. It classifies aerosol containers according to their pressure requirements, and specifies the materials of construction and certain constructional and testing requirements. It also specifies the maximum volume and pressure of the contents of filled aerosol containers and provides methods of testing filled aerosol containers.

This standard does not apply to aerosol containers the contents of which are separated from the propellant by physical means such as in a barrier pack type of container.

NOTE: This standard applies only to aerosol containers for the packing of products which require normal protection and which are not subject to extreme conditions during transport, handling and storage. In other cases, the standard should be supplemented by discussion between the container supplier and the purchaser. In particular, the standard should not be used without further qualification to describe aerosol containers for use with dangerous goods.

1.2 DEFINITIONS. For the purpose of this standard the definitions given in AS Z47 and the following definitions apply:

Aerosol container—a non-refillable container designed to hold its intended contents at a pressure greater than atmospheric, the pressure being provided by means of a propellant, and designed to dispense those contents by means of a valve.

Product -the total contents of a filled aerosol container including the propellant.

1.3 CLASSIFICATION.

1.3.1 Pressure. Aerosol containers shall be classified according to the maximum pressure they are designed to withstand, as follows (see also Table 1.1):

Low pressure container—an aerosol container for products which will generate a pressure not exceeding 970 kPa at 55°C.

Intermediate pressure container—an aerosol container for products which will generate a pressure not exceeding 1100 kPa at 55°C.

High pressure container—an aerosol container for products which will generate a pressure not exceeding 1240 kPa at 55°C.

1.3.2 Size. Aerosol containers shall be grouped according to their internal diameter and brim-full capacity, as follows (see also Table 1.1):

Group 1—internal diameter not more than 75 mm and brim-full capacity not exceeding 820 mL.

Group 2—internal diameter exceeding 75 mm but not more than 85 mm, and brim-full capacity exceeding 820 mL but not more than 1400 mL.

1.4 MATERIALS OF CONSTRUCTION.

1.4.1 Permissible Materials. Aerosol containers shall be made from any of the following materials:

(a) Carbon or alloy steel that complies with the relevant sections of AS 1517, Parts 1 or Part 2.

TABLE 1.1
CLASSIFICATION OF AEROSOL CONTAINERS

Group	Pressure classification	Internal diameter d mm	Brim-full capacity V mL	Distort pressure* kPa	Burst pressure† kPa
1	Low	$d \leq 75$	$V \leq 820$	1100	1450
	Intermediate	$d \leq 75$	$V \leq 820$	1240	1660
	High	$d \leq 75$	$V \leq 820$	1450	1860
2	Low	$75 < d \leq 85$	$820 < V \leq 1400$	1100	1650
	Intermediate	$75 < d \leq 85$	$820 < V \leq 1400$	1240	1930
	High	$75 < d \leq 85$	$820 < V \leq 1400$	1450	2100

*Determined in accordance with Appendix A, Paragraph A2.
†Determined in accordance with Appendix A, Paragraph A3.

NOTE: See also Clause 2.2 for maximum filling pressures.