Amendment 1 - July 1987

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Australian Standard®
2808—1985

DENTAL EQUIPMENT—
CARTRIDGE SYRINGES FOR ANAESTHETIC PURPOSES

The Tariffs, Instruments, Materials and Equipment Committee of the Australian Dental Association has adopted this standard for use in connection with its program for accreditation of certified dental products, lists of which are published periodically. Enquiries regarding this program should be addressed direct to the Australian Dental Association. When used in connection with the program, the standard is known as Australian Dental Standard (ADS), 2808—1985.

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The following interests are represented on Committee DN/9:

- Australian Dental Association
- Australian Dental Standards Laboratory
- Australian Dental Trade Association
- Dental Hospitals
- Dental Profession
- Department of Defence
- Victorian Employers Federation

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STANDARDS ASSOCIATION OF AUSTRALIA
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AMENDMENT No 1
to
AS 2808—1985
DENTAL EQUIPMENT—
CARTRIDGE SYRINGES FOR ANAESTHETIC PURPOSES

REVISED TEXT

The 1985 edition of AS 2808 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: The following sections of the Standard are covered by this amendment: Clauses 2, 4.1, 5.1, 5.2.4, 5.2.6 and 7.2(b).

Published on 6 July 1987.

PREFACE

This standard was prepared by the Association's Committee on Dental Instruments and Equipment, under the direction of the Dental Materials and Equipment Standards Committee. It is one of a series intended for assessing the quality of dental equipment and materials used in Australia.

This standard was prepared in response to a request by the Australian Dental Association because of the unsatisfactory design of some syringes in relation to aspiration.

Because of the need to have interchangeability between cartridge syringes, dental needles and anaesthetic cartridges, requirements have been included to ensure this compatibility, e.g. thread size and length of the cartridge-puncturing end of the dental needle.

Facilities for testing equipment for compliance with this standard are available at the Australian Dental Standards Laboratory, 240 Langridge Street, Abbotsford, Victoria, 3067.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
DENTAL EQUIPMENT—CARTRIDGE SYRINGES, FOR ANAESTHETIC PURPOSES

1 SCOPE. This standard specifies requirements for reusable syringes of the aspirating, non-aspirating and self-aspirating type for dental anaesthetic use.

NOTE: The standard is not intended for cartridge syringes having a mechanical advantage action for the creation of high pressure.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1449 Wrought Alloy Steel - Stainless Steel Plate, Sheet and Strip

~~AS 1444 Wrought Alloy Steels—AISI—SAE Standard, Hardenability (H) and Stainless Series~~ SEE AMENDMENT 1

AS 2182 Portable Electrically Heated Steam Sterilizers (Downward Displacement Pressure Steam Type)

AS 2487 Dry Heat Sterilizers (Hot Air Type)

ISO 261 ISO General Purpose Metric Screw Threads—General Plan

ISO 965/1 ISO General Purpose Metric Screw Threads—Tolerances—Part 1: Principles and Basic Data

3 DEFINITIONS. For the purpose of this standard, the following definitions apply:

3.1 Aspiration—withdrawal of blood or body fluid into the anaesthetic cartridge.

3.2 Unit pack—a pack containing a dental cartridge syringe and any adaptors.

4 MATERIALS.

4.1 Metal. If made of metal, the syringe shall be capable of repeated sterilization when tested in accordance with Appendix A, and shall not corrode when tested in accordance with Appendix B. Stainless steel, if used, shall be in accordance with ~~AS 1444~~ AS 1449. SEE AMENDMENT 1 Any plating on the base metal shall be free from plating defects, and shall pass the tests for sterilization and corrosion resistance when tested in accordance with Appendices A and B respectively.

4.2 Plastics. If made of plastics, and claimed by the manufacturer to be capable of repeated sterilization, the syringe shall pass the test for sterilization without becoming brittle, soft, distorted or damaged when tested in accordance with Appendix A.

5 DESIGN AND CONSTRUCTION.

5.1 Design. The cartridge syringe shall—

(a) permit the loading of the cartridge in the side or from the top of the barrel;

(b) permit secure attachment of the needle;

(c) permit observation of the solution being injected:

(d) permit the use of needles varying in size from 0.50 mm to 0.31 mm* nominal external diameter;

(e) permit aspiration at any time during use, if of the aspirating type; SEE AMENDMENT 1

~~NOTE: Several syringes of the aspirating type are designed for use only with cartridges equipped with specially designed rubber plungers. These syringes may not work with rubber plungers of other designs.~~

(f) have a free-running plunger rod which shall be supported in a manner whereby there is no sideways movement of the plunger rod; and

(g) permit the appropriate size of anaesthetic cartridge to be securely held during all manipulations.

Where a needle adaptor is present, it shall be capable of accommodating needles from 0.50 mm to 0.31 mm in nominal external diameter.

5.2 Construction.

5.2.1 *Diameter.* The internal diameter of the syringe shall be not more than 9.5 mm and not less than 9.1 mm.

5.2.2 *Viewing port(s).* There shall be at least one viewing port, at least 5 mm in width and exposing at least half of the length of the cartridge and located in such a position that the end of the cartridge, which is punctured by the needle, can be seen.

5.2.3 *Spring.* Where a spring is present, it shall pass the test for corrosion when tested in accordance with Appendix B.

5.2.4 *Male hub fitting.* The length of the male hub fitting (dimension *A* in Fig. 1) shall be a maximum of 4.5 mm.

The maximum dimension, *B*, as depicted in Fig. 1, shall be ~~11 mm~~. 4 mm. SEE AMENDMENT 1

5.2.5 *Thread.* A thread shall be provided at the needle end of the cartridge syringe to accommodate the needle. The thread size shall be 7/32″ × 40 TPI Whitworth† form.

5.2.6 *Length of plunger rod.* SEE AMENDMENT 1 ~~The plunger rod shall be of sufficient length to traverse the length of the dental anaesthetic cartridge. The length of the plunger rod shall be not greater than 90 mm.~~

5.2.7 *Plunger tip.* There shall be on the cartridge end of the plunger rod a permanently attached tip, or a means of securing various plunger tips supplied by the manufacturer of the cartridge syringe.

6 INSTRUCTIONS FOR USE. Each dental cartridge syringe shall be accompanied by adequate and accurate instructions for use, which shall include the following:

(a) Size of cartridge that is to be used with the syringe.

* Formerly 25 SWG to 30 SWG.

† It is envisaged that this thread will change in 1987 to a M6 × 0.75 7H, as specified in ISO 261 and ISO 965/1.