AS 1840-1976 Obsolescent (TAS, May 1982)
AS 1841 SUPERSEDED BY AS 1841-1983
AS 1842 SUPERSEDED BY AS 1842-1983

Incorporating Amendments 1 to 4

AS 1840 to 1842 — 1976
UDC 614.845.2

1/F
ire
xtinguishers

DUPC

1840 still Current

Australian Standards 1840 to 1842–1976

PORTABLE FIRE EXTINGUISHERS
WATER TYPE

May 1982

AS 1840—OBSOLESCENT STANDARD

AS 1840 is obsolescent and is not to be used in relation to the manufacture of new extinguishers. The standard remains available only for the purposes of replacement parts manufacture and maintenance. The SAA Certification Mark is no longer available in relation to this standard.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

STANDARDS ASSOCIATION OF AUSTRALIA
SYDNEY LIBRARY

e

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

Associated Chambers of Manufactures of Australia

Australian Chamber of Commerce

Australian Fire Board

Australian Fire Protection Association

Department of Construction

Department of Defence

Department of Manufacturing Industry

Department of Transport

Departments of Labour and Industry

Electricity Supply Association of Australia

Fire Brigades

Insurance Council of Australia

Railways of Australia Committee

Royal Australian Institute of Architects

Telecom Australia

These standards, prepared by Committee BD/18/3, Fire Extinguishers, were approved on behalf of the Council of the Standards Association of Australia on 29 September 1975, and were published on 1 May 1976.

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

These standards were issued in draft form for public review as DR 74115-74117.

AUSTRALIAN STANDARD SPECIFICATIONS

WATER TYPE PORTABLE FIRE EXTINGUISHERS

AS 1840—1976 Water (Soda Acid) Type (obsolescent TAS, May 1983)
AS 1841—1976 Water (Gas Container) Type
AS 1842—1976 Water (Stored Pressure) Type

First published (as AS A31)	1937
Revised	1963
Revised	1969
Revised and issued as AS 1840 to 1842	1976
Amended	June 1977
Amended	June 1978
Amended	September 1979
Amended	April 1980
Reprinted incorporating amendments	1980

STANDARDS ASSOCIATION OF AUSTRALIA SYDNEY LIBRARY

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W. (Copyright)

ISBN 0 7262 0867 1

T 8 OCT 1980

PREFACE

These standards were prepared by the Association's Committee on Fire Extinguishers as the revision and metrication of AS A31.1—1969, A31.2—1969 and A31.3—1969, which they accordingly supersede. The work of revising and metricating these standards is part of a programme covering all the standards dealing with fire extinguishers.

The design of the extinguishers is based on the pressure developed in a correctly charged extinguisher when it is operated at a temperature of 65°C and with the outlet blocked. This is also the basis for design in the latest draft British Standard for portable fire extinguishers, DC 74/13178.

The scope of each standard is now restricted to metal-bodied extinguishers, and throughout the range of standards for fire extinguishers an attempt has been made to bring comparable requirements into line with one another. The standards now refer to one size of extinguisher. i.e. the 9 litre capacity which was previously referred to as the 2 gallon capacity extinguisher; the tolerance range on this size, i.e. 2 to 2½ gallons, has been retained in the metric size which may be between 9 and 11·5 litres. The reference to the smaller size, i.e. 1 gallon, has been deleted.

Some purchasers may require evidence from manufacturers or suppliers that their product complies with the provisions of the relevant standard. The 'AS' certification trademark of the Association (see Note to marking clause) on an extinguisher is an independent assurance of such compliance. Attention is drawn to the fact that the Standards Association intends to extend the 'AS' certification mark scheme to embrace these standards; meanwhile the scheme will continue to apply to products complying with AS A31 until 30 April 1977.

Other Australian standards dealing with portable fire extinguishers are—

AS 1843 to 1845	Foam Type
AS 1846	Dry Chemical Type
AS 1847	Carbon Dioxide Type
AS 1848	Halogenated Hydrocarbon Type
AS 1849	Identification Colours for Portable Fire Extinguishers
AS 1850	Classification, Fire Testing and Rating of Portable Fire Extinguishers
AS 1851	Rules for the Installation and Maintenance of Portable Fire Extinguishers and Fire Hose Reels

These standards require reference to AS 2030, SAA Gas Cylinders Code, and the cylinder specifications listed therein, and to AS K185, Colours for Specific Purposes.

CONTENTS

		Page
AS 1840	WATER (SODA ACID) TYPE PORTABLE FIRE EXTINGUISHERS	
Section 1	Scope and Definitions	4
Section 2	Design and Construction	5
Section 3	Testing	12
Section 4	Marking and Identification	13
AS 1841	WATER (GAS CONTAINER) TYPE PORTABLE FIRE EXTINGUISHERS	
Section 1	Scope and Definitions	15
Section 2	Design and Construction	16
Section 3	Testing	21
Section 4	Marking and Identification	22
Section 5	Compressed Gas Containers	24
AS 1842	WATER (STORED PRESSURE) TYPE PORTABLE FIRE EXTINGUISHERS	
Section 1	Scope and Definitions	27
Section 2	Design and Construction	28
Section 3	Testing	33
Section 4	Marking and Identification	35
APPENDICES		
A	Materials for Welding or Brazing	37
B	Welding or Brazing of Extinguishers—Permissible Methods	39
C	Additional Requirements for Resistance (Seam or Spot) Welding	40
D	Fusion Welding	41
E	Inter-granular Corrosion Test for Austenitic Stainless Steel	43
F	Type Approval Test	44

AS 1840, obsolescent (TAS May 1982)

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard Specification for WATER (SODA ACID) TYPE PORTABLE FIRE EXTINGUISHERS

SECTION 1. SCOPE AND DEFINITIONS

1.1 SCOPE. This specification applies to metal-bodied portable fire extinguishers of the water type, in which the water is expelled by pressure generated as a result of chemical reaction between sulphuric acid and a sodium bicarbonate solution in the extinguisher. It refers to materials, methods of manufacture and performance of the extinguisher.

NOTE: The requirements for turnover type extinguishers are retained in this specification solely to facilitate parts replacement as it is intended that these types should be phased out of manufacture not later than 1 January 1980.

1.2 DEFINITIONS. For the purpose of this specification, the following definitions apply:

1.2.1 Portable fire extinguisher—a first-aid firefighting appliance which is designed to be carried and operated by hand and which in working order has a mass not greater than 23 kg.

NOTE: This limit of 23 kg may be reconsidered internationally and could be reduced to 20 kg.

1.2.2 Water (soda acid) type portable fire extinguisher—a portable fire extinguisher which relies on the chemical reaction between sulphuric acid and a sodium bicarbonate solution to expel the water.

NOTE: The water (soda acid) type portable fire extinguisher is generally referred to in this specification as 'an extinguisher' or 'the extinguisher'.

1.2.3 Reversible (turnover) type extinguisher—an extinguisher in which the acid bottle is fitted with a loose stopper so that when the extinguisher is inverted the stopper falls clear and releases the acid.

1.2.4 Break-bottle (plunger) type extinguisher — an extinguisher in which the acid bottle is sealed and must be broken to operate the extinguisher.

1.2.5 Splash-proof type extinguisher — an extinguisher in which the stopper of the acid bottle is held in position by a spring fitted with a release mechanism.