AS 1687—1991

Australian Standard®

Knapsack spray pumps for firefighting

This Australian Standard was prepared by Committee FP/6, Knapsack Spray Pumps. It was approved on behalf of the Council of Standards Australia on 7 November 1990 and published on 11 February 1991.

The following interests are represented on Committee FP/6:

Australian Assembly of Fire Authorities

Australian Association of Rural Fire Authorities

Bush Fire Council of New South Wales

Commonwealth Fire Board

Confederation of Australian Industry

Department of Conservation and Environment, Victoria

Department of Defence

Electricity Supply Association of Australia

Forestry Commission of New South Wales

Telecom Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee FP/6 on Knapsack Spray Pumps, to supersede AS 1687-1981.

In preparing this Standard, the committee gave consideration to the problem of ultraviolet degradation of plastics.

There is at present no accelerated weathering test which can be applied to plastics to determine actual behaviour in service. Although work is proceeding in this area, the accelerated tests which are available can only be used for comparison purposes and may have no relation to the degradation which could be experienced in the field.

For this reason, an ultraviolet degradation test has not been included. Because of the range of ultraviolet stabilizers available and the problems of nominating a quantity of any specific stabilizer, it was not possible to specify the amount or type of ultraviolet stabilizer which would result in a satisfactory performance. The committee is aware of this shortcoming in the Standard and will keep the matter under review.

The scope of the Standard has been broadened to include hand-held appliances. Other changes have been introduced as follows:

(a) Clause 2 – a new clause listing all referenced documents.

(b) Clause 3 – the definition for an appliance has been added. Definitions for the bearing and non-bearing surfaces of straps have been deleted.

(c) Clause 4 – provides a minimum capacity for the water container.

(d) Clause 6.2 – a new clause for welded construction.

(e) Clause 6.3 – now includes a minimum diameter for the filler opening.

(f) Clause 6.4 – no longer requires the lid to be attached to the container.

(g) Clause 6.5 – provides for the hose to be constructed from high density polyethylene.

The committee has also clarified test requirements, and deleted clauses for the baffle and the bottom of the container as these are considered design restrictive.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard
Knapsack spray pumps for firefighting

1 SCOPE This Standard specifies requirements for the design, construction and performance of knapsack spray pumps for firefighting of the portable, hand-operated, water-container type. It specifies the materials and construction details and includes performance tests requirements.

NOTE: For specific directives regarding the use of this Standard by the Department of Defence, see Appendix A.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1167 Welding and brazing—Filler metals
1167.1 Part 1: Filler metals for brazing and braze welding
1167.2 Part 2: Filler metal for welding

2001 Methods of test for textiles
2001.2.3 Part 2.3: Physical tests—Determination of breaking force and extension of textile fabrics

2554 Hose and hose assemblies for air

2700 Colour standards for general purposes

DEF(Aust)
5541 General requirements to accompany specifications produced outside the defence group

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Appliance—a knapsack spray pump.

3.2 Approved—approved by the regulatory authority.

3.3 Knapsack spray pump—an appliance consisting essentially of a water container, carrying straps, a hose and hand-operated pump, and intended for carriage by a person.

3.4 Regulatory authority—a Minister of the Crown, a government department, or other public authority having power to issue regulations, orders or other instructions in respect of any subject covered by this Standard.

4 CAPACITY OF WATER CONTAINER The capacity of the container shall be not less than 9 L and not more than 22 L.

5 MATERIALS

5.1 Metal container A metal container shall be constructed of sheet brass or other approved corrosion-resistant material not less than 0.5 mm thick.

5.2 Plastics container A plastics container shall be moulded from a high density polyethylene or other plastics material with strength, thermal resistance, flammability, and ageing characteristics at least equal to high density polyethylene. The plastics material shall incorporate a suitable ultraviolet stabilizer.

NOTE: Acceptable ultraviolet stabilization is performance equivalent to the inclusion of 2 percent carbon black in polyethylene.

6 CONSTRUCTION OF WATER CONTAINER

6.1 General A metal or plastics container shall be suitably shaped so as to provide adequate comfort when carried by a person. The appliance shall be designed to stand in an upright position without support. An air vent shall be provided.

6.2 Welded construction Welded joints shall be made by one of the methods described in Appendix B.

6.3 Filler opening A filler opening not less than 38 mm diameter and not greater than 125 mm diameter shall be fitted to the container. The joint between the neck of the filler opening and the top shall be mechanically secure and watertight.

6.4 Lid The filler opening shall be fitted with a quick-action lid to make an effective water-seal. The lid shall be easily removable with one hand in not more than 5 s.

6.5 Hose connection The hose connection and fittings shall be of an approved corrosion-resistant material.

NOTE: Materials may include brass, gunmetal, stainless steel and high density polyethylene.