

Australian Standard[®]

**Clothing for protection against
hazardous chemicals**

**Part 1: Protection against general
or specific chemicals**

This Australian Standard was prepared by Committee SF/4, Protective Clothing. It was approved on behalf of the Council of Standards Australia on 22 December 1989 and published on 7 May 1990.

The following interests are represented on Committee SF/4:

Australian Assembly of Fire Authorities
Australian Wool Corporation
Bureau of Steel Manufacturers of Australia
Confederation of Australian Industry
Confederation of Australian Motor Sport
Country Fire Authority
Department of Defence
Department of Employment, Vocational Education, Training and Industrial Relations, Qld
Department of Labour, Victoria
Department of Occupational Health, Safety and Welfare, W.A.
National Occupational Health and Safety Commission (Worksafe Australia)
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**Part 1: Protection against general
or specific chemicals**

First published as AS 3765.1—1990.

PREFACE

This Standard was prepared by the Standards Australia Committee on Protective Clothing, at the request of the Safety Standards Board. It sets out performance requirements for materials and construction of suits designed to afford protection to the wearer against general chemicals or specific chemicals. Such suits are generally worn by personnel involved in the handling and transport of chemicals either where sustained protection is required in the event of a spillage because of the impracticality of immediate removal of clothing, or where the chemical(s) are of a highly toxic or volatile nature requiring the exclusion from the wearer of the ambient atmosphere.

This Standard is one of a series of Standards covering requirements for material, construction, performance, and use of chemical protective clothing.

When complete, the series will consist of the following Standards.

AS

- 3765 Clothing for protection against hazardous chemicals
- 3765.1 Part 1: Protection against general or specific chemicals
- 3765.2 Part 2: Limited protection against specific chemical splash
- 3765.3 Part 3: Selection, care and use

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FOREWORD

In the application, transportation, disposal, or spillage of chemicals, persons, through error or accident, may be exposed to substances which are harmful on contact with their bodies.

The use of chemical protective clothing is but one component of the overall program for maintaining the health and safety of employees. It complements (and is not a substitute for) good planning, work practices, engineering and administrative controls, and personal hygiene. It is therefore a key element in minimizing the potential for worker exposure to harmful chemicals.

STANDARDS AUSTRALIA

Australian Standard

Clothing for protection against hazardous chemicals

Part 1: Protection against general or specific chemicals

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies requirements for gastight suits, ventilated suits, and splash suits for protection against contact with hazardous chemicals in the form of solid particles, liquids, mists, gases, or vapours, in the industrial environment.

1.2 CLASSIFICATION.

1.2.1 General. Protective clothing for use as a barrier to hazardous chemicals shall be classified according to the chemicals it is effective against and the extent to which the ambient atmosphere is sealed from that within the space enclosed by the clothing.

1.2.2 Primary classification. Chemical protective clothing shall be classified as general purpose type or specific purpose type as follows:

- (a) *General purpose type.* General purpose suits.
- (b) *Specific purpose type.* Specific purpose suits.

General purpose suits shall provide protection for the specified minimum time against the chemicals listed in Table 2.1.

Specific purpose suits shall provide protection for the specified minimum time against the chemical or chemicals for which the material of the suit has been designed.

1.2.3 Secondary classification. Both general purpose and specific purpose types may be classified according to the extent to which the external atmosphere is excluded, as follows:

- (a) *Class 1.* Gastight suits (full body encapsulating suits). These are worn with appropriate respiratory protection which may be of the self-contained or air line type.
- (b) *Class 2.* Ventilated suits (one piece coverall). These are supplied with air from a compressed air hose which provides both breathing air and positive pressure. An emergency escape type self-contained breathing apparatus may be incorporated.
- (c) *Class 3.* Splash suits. These are without positive pressure. They comprise one or more components, e.g. hood, blouse and trousers, boots and gloves. The suit may be used with a positive pressure hood supplied with an air line, with a self-contained breathing apparatus, or with an air purifying respirator. Alternatively, the suit may incorporate only a full face visor where respiratory protection is not required.

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

AS	
1020	The control of undesirable static electricity
1192	Electroplated coatings—Nickel and chromium
1269	Hearing conservation
1337	Eye protectors for industrial applications
1441	Methods of test for coated fabrics
1441.7	Part 7: Method for determination of resistance to heat
1716	Respiratory protective devices
1801	Industrial safety helmets
2161	Industrial safety gloves and mittens (excluding electrical and medical gloves)
2210	Safety footwear
2380	Electrical equipment for explosive atmospheres—Explosion-protection techniques
2380.7	Part 7: Intrinsic safety i
2480	Electrical equipment for explosive atmospheres – Flameproof enclosure – Type of protection d
2512	Methods of testing protective helmets
2512.1	Part 1: Definitions and headforms