

AS 1169—1982

Australian Standard<sup>®</sup>

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**Minimizing of combustion hazards  
arising from medical use of  
flammable anaesthetic agents**

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This Australian standard was prepared by Committee MD/4, Medical Gases and Pipeline Services. It was approved on behalf of the Council of the Standards Association of Australia on 3 August 1982 and published on 11 October 1982.

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The following interests were represented on the committee responsible for the preparation of this standard:

Association of Consulting Engineers Australia  
Australian Society of Anaesthetists  
Confederation of Australian Industry  
Department of Health  
Department of Housing and Construction  
Department of Public Works, New South Wales  
Department of Public Works, Western Australia  
Electricity Trust of South Australia  
Health Commission of New South Wales  
Hospital architects  
Institute of Hospital Engineers  
Metal Trades Industry Association of Australia  
Public Buildings Department, South Australia  
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## PREFACE

This edition of this standard was prepared by the Association's Committee on Medical Gases and Pipeline Services under the direction of the Medical Materials and Equipment Standards Committee. It supersedes Part 1 of AS 1169–1973, but does not supersede part 2 of AS 1169–1973. Part 2, which at present applies to the installation and testing of medical gas supply systems, is under revision and will be re-issued with a different Australian standard number.

This edition takes account of changes in medical practice that have occurred since publication of the previous edition, particularly the frequent and widespread use of surgical diathermy and the increasing use of electromedical equipment for monitoring patients. In addition, the committee recognized that in the majority of operating theatres, in most medical rooms in industrial premises, in dental surgeries and the like, flammable anaesthetic agents are no longer used. The use of non-flammable agents for anaesthesia eliminates the need for extensive precautions for minimizing fire and explosion hazards.

The precautionary requirements specified herein for the use of flammable agents are essentially the same as those prescribed in the 1973 edition. Likewise this new edition highlights as possible sources of ignition, incendive sparks of electrical, electrostatic and percussive origin, naked flames and hot materials, and inadvertent mixing of flammable anaesthetic agents. It includes appropriate precautions covering the design, construction and furnishing of buildings, administration of hospitals, equipment and practices to be adopted by personnel.

In regard to intrinsically safe equipment, in general, requirements are only meaningful in relation to low-energy-consuming circuits such as those used with endoscopic instruments incorporating sensitive relays, thermionic valves or semiconductor devices. Attention is drawn to the fact that incandescent lamps may achieve temperatures which may be unsafe within hazardous locations. Cold light sources, e.g. fiberoptic, are regarded as satisfactory provided that the generator is located outside the hazardous area.

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