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## THE STORAGE AND HANDLING OF HAZARDOUS CHEMICAL MATERIALS— CLASS 5.2 SUBSTANCES— ORGANIC PEROXIDES

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THE STORAGE AND HANDLING OF HAZARDOUS CHEMICAL  
MATERIALS—CLASS 5.2 SUBSTANCES—ORGANIC  
PEROXIDES]



**STANDARDS ASSOCIATION OF AUSTRALIA**  
*Incorporated by Royal Charter*



This Australian standard was prepared by Committee CH/9, Safe Handling of Chemicals. It was approved on behalf of the Council of the Standards Association of Australia on 14 March 1984 and published on 11 May 1984.

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The following interests are represented on Committee CH/9:

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*This standard was issued in draft form for comment as DR 79052.*

**AUSTRALIAN STANDARD**

**THE STORAGE AND HANDLING  
OF HAZARDOUS CHEMICAL  
MATERIALS—  
CLASS 5.2 SUBSTANCES—  
ORGANIC PEROXIDES**

**AS 2714—1984**

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## PREFACE

This standard was prepared by the Association's Committee on Safe Handling of Chemicals under the direction of the Chemical Standards Board as part of a plan to provide guidance in the storage, handling and transport of hazardous chemical materials. This standard deals with Class 5.2 substances, as classified in AS 1216, Part 1 and augments the information contained in the associated storage and handling information card (AS 2508) for Class 5.2 substances. These two complement the associated Transport Emergency Procedure Guide (AS 1678) for the same class of substance.

The complete scheme, of which this standard is a part, incorporates the same treatment of all other hazardous substances classified in AS 1216, Part 1, thus providing adequate instructions for storage, handling and transport of these goods as well as information for dealing with emergency situations, should the latter arise.

The complexities of the wide range of organic peroxide types available make it necessary for segregation recommendations to be strictly followed and a table of segregation distances is provided, distances depending on packaging group and quantity stored.

Particular emphasis has been placed on the treatment of emergency situations, disposal of waste and spillage in a manner consistent with environmental considerations.

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## STANDARDS ASSOCIATION OF AUSTRALIA

## Australian Standard

for

THE STORAGE AND HANDLING OF HAZARDOUS CHEMICAL MATERIALS—  
CLASS 5.2 SUBSTANCES—ORGANIC PEROXIDES

## SECTION 1. SCOPE AND GENERAL

**1.1 SCOPE.** This standard sets out requirements for the storage and handling, including dispensing, and disposal of organic peroxides, i.e. Class 5.2 substances as classified in AS 1216 Part 1.

It does not apply to organic peroxides that have entered an actual manufacturing cycle and have been subjected to physical or chemical treatments.

**1.2 APPLICATION.** The requirements of the standard should be read in conjunction with, but do not take precedence over, any statutory regulations that may apply in the area. Additional advice may need to be sought from the supplier of the goods.

**1.3 REFERENCED AND RELATED DOCUMENTS.** The following documents are referred to in this standard.

|         |   |
|---------|---|
| AS 1020 | SAA Static Electricity Code   |
| AS 1216 | Classification, Hazard Identification and Information Systems for Dangerous Goods<br>Part 1—Classification and Class Labels for Dangerous Goods<br>Part 2—HAZCHEM Emergency Action Code<br>Part 3—NFPA Hazard Identification System<br>Part 4—UN Substance Identification Numbers |
| AS 1221 | Fire Hose Reels   |
| AS 1337 | Eye Protectors for Industrial Applications  |
| AS 1375 | SAA Industrial Fuel Fire Appliances Code  |
| AS 1678 | Emergency Procedure Guides—Transport  |
| AS 1716 | Respiratory Protective Devices  |
| AS 1850 | Portable Fire Extinguishers—Classification, Rating and Fire Testing   |
| AS 2118 | SAA Code for Automatic Fire Sprinkler Systems   |
| AS 2161 | Industrial Safety Gloves and Mittens (Excluding Electrical and Medical Gloves)  |
| AS 2210 | Safety Footwear   |
| AS 2359 | SAA Industrial Truck Code   |
| AS 2430 | Classification of Hazardous Areas<br>Part 1—Explosive Gas Atmospheres   |
| AS 2508 | Safe Storage and Handling Information Cards for Hazardous Materials   |

Australian Code for the Transport of Dangerous Goods by Road and Rail\*

Attention is drawn to the following related standards:

|         |  |
|---------|--|
| AS 1336 | Recommended Practices for Eye Protection in the Industrial Environment |
| AS 1339 | Code of Practice for Manual Handling of Materials                      |
| AS 1470 | General Principles for Safe Working in Industry                        |
| AS 1530 | Methods for Fire Tests on Building Materials and Structures            |
| AS 1715 | Selection, Use and Maintenance of Respiratory Protective Devices       |
| AS 1885 | Code of Practice for Recording and Measuring Work Injury Experience    |
| AS 3000 | SAA Wiring Rules   |
| AS XXXX | Laboratory Construction†   |

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

**1.4.1 Control temperature**—the maximum temperature at which an organic peroxide can be safely transported over a prolonged period of time. This is determined from the self-accelerating decomposition temperature (SADT) as follows:

For an SADT  $\leq 20^{\circ}\text{C}$  deduct  $20^{\circ}\text{C}$  from the SADT  
For an SADT  $> 20^{\circ}\text{C} \leq 35^{\circ}\text{C}$  deduct  $15^{\circ}\text{C}$  from the SADT

For an SADT  $\geq 35^{\circ}\text{C}$  deduct  $10^{\circ}\text{C}$  from the SADT

**1.4.2 Self-accelerating decomposition temperature (SADT)**—the temperature limit above which the decomposition reaction proceeds at such a rate that the heat generated cannot be adequately dissipated. The size and type of container can significantly influence the SADT.

**1.4.3 Emergency temperature**—the temperature at which emergency procedures (e.g. disposal procedures) must be initiated to ensure that material destruction cannot occur.

If the control temperature is  $\leq 0^{\circ}\text{C}$  the emergency temperature can be set at  $10^{\circ}\text{C}$  above the control temperature.

If the control temperature is  $> 0^{\circ}\text{C}$  the emergency temperature can be set at  $5^{\circ}\text{C}$  above the control temperature.

**1.4.4 Phlegmatizer**—a diluent introduced into a material which is hazardous in its pure form, in concentrations such that the mixture is significantly less hazardous.

\*Prepared by the standing national Advisory Committee on the Transport of Dangerous Goods. Secretariat: Department of Transport, Canberra.

†In course of preparation.