

Australian Standard[®]

**VAPOUR DEGREASING PLANT—
DESIGN, INSTALLATION AND
OPERATION—SAFETY
REQUIREMENTS**

This Australian standard was prepared by Committee SF/24, Safety Code for Degreasing Plant. It was approved on behalf of the Council of the Standards Association of Australia on 18 August 1983 and published on 7 October 1983.

The following interests are represented on Committee SF/24:

Australian Chemical Industry Council
Australian Chemical Specialities Manufacturers Association
Australian and New Zealand Society of Occupational Medicine
Commonwealth Institute of Health
Confederation of Australian Industry
Department of Defence
Department of Industrial Relations, N.S.W.
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This standard was issued in draft form for comment as DR 82150.

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First published 1983

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 3188 6

PREFACE

This standard was prepared by the Association's Committee on Safety for Degreasing Plant at the request of the Safety Standards Board, in an endeavour to establish safety requirements for the safe use of vapour degreasing plant.

The standard sets out the safety measures to be implemented by suppliers and manufacturers of vapour degreasing plant and prescribes requirements that ensure the safety and health of personnel engaged in the operation of such plant. It includes appendices that set out a recommended method for the cleaning of degreasing plant, first aid procedures and the description of properties of solvents used in vapour degreasing processes.

Persons who work with organic solvents may be exposed to hazards of airborne contamination, e.g. toxicity, and to other hazards such as oxygen starvation, decomposition products, liquid splashing and others. Protective measures should therefore be adopted by operators to avoid exposure by ingestion, by skin absorption or by inhalation of vapours or liquids at a concentration greater than those provided for in hygiene standards for atmospheric contaminants.

The standard covers the following categories of vapour degreasing plant using organic solvents:

- (a) Vapour degreasing.
- (b) Vapour degreasing with ultrasonic agitation.

The requirements set out in the standard may be considered for incorporation in statutory regulations.

This standard does not cover surface treatment processes or aqueous or alkaline degreasing and cleaning operations.

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STANDARDS ASSOCIATION OF AUSTRALIA

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for
**VAPOUR DEGREASING PLANT—DESIGN, INSTALLATION AND OPERATION—
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SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard sets out the requirements for the safe operation of vapour degreasing plant. It includes requirements for design, construction, installation and operation of such plant where they are related to the safety of personnel and equipment.

1.2 APPLICATION. The standard is intended for use by designers, manufacturers, and operators of vapour degreasing plant and shall be applied as follows:

- (a) All degreasing plant shall comply with the specific requirements of Sections 2, 3 and 4.
- (b) The standard shall be applied in conjunction with the specific requirements of the appropriate standards and other specifications covering solvents for degreasing purposes.
- (c) The protection requirements of Section 5 for the safety and health of the operators of degreasing plant shall be implemented.

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

AS 1210	SAA Unfired Pressure Vessels Code
AS 1319	Rules for the Design and Use of Safety Signs for the Occupational Environment
AS 1337	Eye Protectors for Industrial Applications
AS 1345	Identification of the Contents of Piping, Conduits and Ducts
AS 1375	SAA Industrial Fuel Fired Appliances Code
AS 1470	Code of General Principles for Safe Working in Industry
AS 1668	SAA Mechanical Ventilation and Air-Conditioning Code Part 2—Ventilation Requirements
AS 1678	Emergency Procedures Guide
AS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS 1716	Respiratory Protective Devices
AS 1850	Rules for the Design and Construction of Single Automatic Oil and Gas Burners and Their Application to Boilers
AS 1885	Code of Practice for Recording and Measuring Work Injury Experience
AS 1891	Industrial Safety Belts and Harnesses
AS 2106	Methods for the Determination of the Flashpoint of Flammable Liquids (Closed Cup)

AS 2243	Safety in Laboratories Part 1—General Part 2—Chemical
AS 2508	Safe Storage and Handling Information Cards
AS 2626	Industrial Safety Belts and Harnesses— Selection, Use and Maintenance
AS 3000	SAA Wiring Rules
AS CB 18	SAA Pressure Piping Code Part 1—Ferrous Piping
AS XXXX	Work in Confined Spaces*
AS YYYY	Storage and Handling of Flammable Liquids*

Occupational Health Guides (issued by the National Health and Medical Research Council)

Manual of Occupational First Aid (issued by the St John Ambulance Association).

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

1.4.1 Atmospheric contaminant—a gas, vapour or aerosol, which is not a constituent of the normal atmosphere.

1.4.2 Condensate—a liquid solvent resulting from the cooling of solvent vapour. It is the clean solvent which forms on the condensing coils of a vapour degreaser or still.

1.4.3 Competent authority—a Minister of the Crown, a government department or other public authority having power to issue regulations, orders or other instructions having the force of law in respect of any subject covered by this standard.

1.4.4 Degreasing process—a process whereby soil and unwanted contaminants are removed from the surface of materials.

1.4.5 Degreasing solvent—an organic compound in a liquid or vapour state used in a degreasing process. (See Appendix C.)

1.4.6 Drag-out—solvent which is carried out of a vapour degreasing operation as a liquid trapped in or on the parts being processed.

1.4.7 Flashpoint—the lowest temperatures at which application of a small flame causes the vapour above a flammable liquid to produce a momentary flash when it is heated under standardized conditions of test laid down by an appropriate test method, as in AS 2106.

* In course of preparation.