

AS 3780:2023



The storage and handling of corrosive substances



AS 3780:2023

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- Accord Australasia
- Australasian Fire and Emergency Service Authorities Council
- Australasian Institute of Dangerous Goods Consultants
- Better Regulation Division (Fair Trading, SafeWork NSW, TestSafe)
- CSIRO
- Chemistry Australia
- ComCare (Commonwealth Government)
- Department of Mines, Industry Regulation and Safety, WA
- Engineers Australia
- Institution of Chemical Engineers
- National Retail Association Australia
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Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS 3780:2008. This document has been revised to reflect changes in regulatory requirements and control philosophies that have been refined since the publication of the 2008 edition.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian rather than an Australian/New Zealand Standard.

This document deals with corrosive substances that are classified as dangerous goods of Class 8, as classified in the UN *Recommendations on the Transport of Dangerous Goods: Model Regulations*.

The objective of this document is to promote the safety of persons, property and the environment where corrosive substances are stored and handled, by providing requirements and recommendations based on industry good practice.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to figures and tables are deemed to be requirements of this document. Notes that appear in the main text of this document provide information only.

Contents

Preface	ii
Section 1 Scope and general	1
1.1 Scope	1
1.2 Exclusions	1
1.3 Application	1
1.4 Normative references	2
1.5 Terms and definitions	3
1.6 Application of sections	10
1.7 Placarding, signage, marking and labelling of containers, equipment, installations and storage areas	10
Section 2 Minor storage	11
2.1 Scope of section	11
2.2 Criteria for classification as minor storage	11
2.3 Precautions for minor storage	11
Section 3 Transit storage	13
3.1 Scope of section	13
3.2 Delineation of transit storage areas	13
3.3 Requirements for transit storage	13
Section 4 Loading and unloading areas	15
4.1 Scope of section	15
4.2 Specifications for loading and unloading areas	15
Section 5 Storage and handling of packages	16
5.1 Scope of section	16
5.2 Types of package stores	16
5.3 Location, separation and segregation	16
5.3.1 Corrosive substances having subsidiary hazard	16
5.3.2 Separation of stores from protected places	16
5.3.3 Segregation of corrosive substances	17
5.4 General requirements for package stores	17
5.5 Requirements for package filling operations	19
5.6 Requirements specifically for indoor storage cabinets	19
5.6.1 Application of clause	19
5.6.2 Types of substances kept	19
5.6.3 Maximum quantities to be kept	19
5.6.4 Cabinet design	20
5.6.5 Materials of cabinet construction	20
5.6.6 Cabinet location	20
5.6.7 Cabinet marking	20
Section 6 Storage and handling in tanks	21
6.1 Scope of section	21
6.2 Tank types	21
6.3 Location of tanks	21
6.3.1 General	21
6.3.2 Separation	21
6.3.3 Segregation	23
6.4 Bunds and compounds	23
6.4.1 General	23
6.4.2 Capacity of compounds	23
6.4.3 Design and construction	23
6.4.4 Compound drainage	25
6.4.5 Maintenance	25
6.5 Design and construction requirements applicable to all tanks	26

6.5.1	Protection against corrosion	26
6.5.2	Foundation	26
6.5.3	Supports	26
6.5.4	Bearing area	27
6.5.5	Vents	27
6.5.6	Liquid lines	27
6.5.7	Transfer points	27
6.5.8	Ancillary equipment for tanks	28
6.6	Additional requirements for portable tanks	29
6.7	Additional requirements for fixed tanks	30
6.7.1	General	30
6.7.2	Materials of construction	30
6.7.3	Tank design and construction	31
6.7.4	Tank lining	31
6.7.5	Level indication	32
6.7.6	Nozzles	32
6.7.7	Overfill lines	33
6.7.8	Requirements for tanks with integral secondary containment	33
6.7.9	Additional requirements for tanks with external fire-rated covering	35
6.8	Filling of tanks	35
6.8.1	General	35
6.8.2	Filling connections	36
6.8.3	Transfer hoses	36
6.8.4	Spillage control for corrosive liquids	36
6.9	Spill management and chemical barrier protection	37
Section 7	Storage and handling of solids	38
7.1	Scope and application of section	38
7.2	Container types	38
7.3	Location of containers	38
7.3.1	General	38
7.3.2	Separation	38
7.3.3	Segregation	39
7.4	Design and construction requirements applicable containers for solids	39
7.4.1	Protection against moisture ingress	39
7.4.2	Protection against corrosion	39
7.4.3	Foundation, supports and bearing area	39
7.4.4	Design of silos and hoppers	40
Section 8	Operational and personnel safety	41
8.1	Scope of section	41
8.2	General Precautions	41
8.2.1	Control of entry	41
8.2.2	Clear access	41
8.2.3	Lighting	41
8.2.4	Ventilation	41
8.2.5	Safety showers and eyewash stations	42
8.2.6	Safety information	42
8.2.7	Checking of safety equipment	42
8.2.8	Activities within stores	42
8.2.9	Handling precautions	42
8.2.10	Site upkeep	42
8.3	Effluent control	42
8.4	Construction and maintenance work	43
8.4.1	General	43
8.4.2	Management of change	43
8.4.3	Routine work	44
8.4.4	Work permit	44
8.4.5	Preparation of work site and plant	44

8.4.6	Completion of work and commissioning	45
8.4.7	Hot work	45
8.4.8	Work inside a confined space	45
8.5	Personnel training	45
8.5.1	Job knowledge	45
8.5.2	Training	45
8.5.3	Contractors	46
8.5.4	Refresher training	46
8.5.5	Hygiene	46
8.6	Personal protective equipment	46
8.6.1	General	46
8.6.2	Types of personal protective equipment	47
8.6.3	Care and maintenance of personal protective equipment	47
8.7	First aid	47
8.8	Additional requirements for the storage and handling of packages	48
8.8.1	Suitability of packaging	48
8.8.2	Marking of packages	48
8.8.3	Procedures for package stores	48
8.9	Additional requirements for bulk storage	49
8.9.1	Bulk storage installations	49
8.9.2	Inspection of plant and equipment	49
Section 9	Emergency management	50
9.1	Scope of section	50
9.2	Planning for emergencies	50
9.2.1	Considerations in designing premises	50
9.2.2	Emergency plan	50
9.3	Management of leaks and spills	52
9.3.1	General	52
9.3.2	Clean-up materials and equipment	52
9.3.3	Actions for dealing with leaks and spills	52
Section 10	Fire protection	53
10.1	Scope of section	53
10.2	General considerations	53
10.3	Fire protection measures	53
10.4	Action in the event of fire	53
Section 11	Waste storage and disposal	54
11.1	Scope of section	54
11.2	Storage of wastes	54
11.3	Items for disposal	54
11.3.1	Corrosive substances	54
11.3.2	Other items	54
11.4	Pre-disposal treatment of empty containers	54
11.5	Methods of disposal	55
Appendix A (informative)	Hazards presented by corrosive substances	56
Appendix B (informative)	Emergency services requirements	58
Appendix C (informative)	GHS Hazards and labels	60
Appendix D (informative)	Placarding, marking, labelling and signage for corrosives installations	65
Bibliography		67

NOTES

Australian Standard®

The storage and handling of corrosive substances

Section 1 Scope and general

1.1 Scope

This document sets out requirements and recommendations for the safe storage and handling of corrosive substances, i.e. substances that meet the Class 8 classification criteria of the ADG Code.

The document also applies to other dangerous goods that are assigned a Class 8 subsidiary hazard by the ADG Code, except where they are of Class 2. The user of this document should refer to relevant federal, state and territory regulations and determine legal requirements as applicable.

Where a corrosive liquid is also classified as a C1 combustible liquid (GHS flammable liquid Category 4), AS 1940 is a relevant Australian Standard.

This document provides minimum acceptable safety requirements for storage facilities, operating procedures, emergency planning and fire protection. It also provides technical guidance that may assist in the storage and handling of corrosive substances in accordance with the risk management requirements of relevant authorized codes of practice.

NOTE A discussion of the hazards presented by corrosive substances is provided in [Appendix A](#).

1.2 Exclusions

This document does not apply to the following:

- (a) Gases having a Class 8 subsidiary hazard, e.g. chlorine.
- (b) Corrosive materials that do not meet the criteria for Class 8 dangerous goods.

NOTE 1 This includes materials which have GHS classification of eye damage/irritation Category 1, but do not meet the GHS classifications of skin corrosion Category 1A to 1C or corrosive to metals Category 1. Such materials are labelled with the GHS corrosive pictogram on inner and sole packaging.

NOTE 2 While excluded from the scope, when determining risk control for these materials reference can be made to parts of this document dealing with eyewash stations and [Sections 8](#) and [11](#).

- (c) The transport of corrosive substances, which is dealt with in the ADG Code.
- (d) The bulk transfer of corrosive substances between a ship and an onshore store, which is controlled by the relevant port authority. AS 3846, should be consulted.
- (e) The manufacture of corrosive substances.

NOTE 3 Storage and handling of corrosive raw materials, intermediates or finished products on these facilities are not excluded from this standard

1.3 Application

This document applies in locations that are generally industrial, commercial or rural in nature.

NOTE 1 An installation may come under the regulatory control of several authorities having differing areas of responsibility, and an approval from one authority does not necessarily constitute an approval from others.

NOTE 2 The National Construction Code (NCC) applies to all matters relating to building works.

1.4 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1210, *Pressure vessels*

AS 1345, *Identification of the contents of pipes, conduits and ducts*

AS 1674 (all parts), *Safety in welding and allied processes*

AS 1692, *Steel tanks for flammable and combustible liquids*

AS 1940, *The storage and handling of flammable and combustible liquids*

AS 2444, *Portable fire extinguishers and fire blankets—Selection and location*

AS 2809.1, *Road tank vehicles for dangerous goods, Part 1: General requirements for all road tank vehicles*

AS 2809.4, *Road tank vehicles for dangerous goods, Part 4: Road tank vehicles for toxic, corrosive or ammonium nitrate emulsion, suspension or gel cargoes*

AS 2865, *Confined spaces*

AS 3600, *Concrete structures*

AS 4100, *Steel structures*

AS 4775, *Emergency eyewash and shower equipment*

AS 60529, *Degrees of protection provided by enclosures (IP Code)*

AS/NZS 1337.1, *Personal eye protection Part 1: Eye and face protectors for occupational applications*

AS/NZS 1680.1, *Interior and workplace lighting, Part 1: General principles and recommendations*

AS/NZS 1680.2.4, *Interior and workplace lighting, Part 2.4: Industrial tasks and processes*

AS/NZS 1715, *Selection, use and maintenance of respiratory protective equipment*

AS/NZS 1716, *Respiratory protective devices*

AS/NZS 1800, *Occupational protective helmets—Selection, care and use*

AS/NZS 1801, *Occupational protective helmets*

AS/NZS 2161 (all parts), *Occupational protective gloves*

AS/NZS 2210.1, *Safety, protective and occupational footwear, Part 1: Guide to selection, care and use*

AS/NZS 4501.2, *Occupational protective clothing, Part 2: General requirements*

AS/NZS 4766, *Rotationally moulded buried, partially buried and non-buried storage tanks for water and chemicals*

AS/NZS 60079 (all parts), *Explosive atmospheres*

American Petroleum Institute (API). *Std 620, Design and Construction of Large, Welded, Low-pressure Storage Tanks*

DIN DVS 2205, (all parts), *Thermoplastic tanks*

EN 12573 (all parts), *Welded static non-pressurized thermoplastic tanks*