Guide to Standards - Workplace Health & Safety

Your snapshot of Australian Standards® and Certification

Company-wide access to the Australian Standards you need.

There is a simple way to obtain access to the Australian Workplace Health and Safety Standards in this guide

Your organisation needs access to the most relevant and current Standards, but managing and sharing a document library can be difficult.

Our web-based Standards On-Line Service allows cost effective management of your organisations access to Australian and International Standards.

Features include:

- Instant access to Australian Standards, anywhere, anytime
- The ability to customise your own Standards collection with multi-user access
- Peace of mind, always have the latest guidelines and legal requirements to manage your compliance obligations
- Automatic updates when new versions are released for your collection
- The most economical way to share access to Standards.

TRY IT FREE

Call us on 131 242 or visit us to register for a free trial

Table of Contents

Introduction

This guide provides information on Standards, Certification schemes and other industry specific information that can be used by organisations to manage areas relating to Workplace Health and Safety (WHS) including risk management, slip hazards, evacuation of buildings, safety and ergonomics.

The resources recommended in this guide provide a framework for organisations with Workplace Health and Safety (WHS) and related obligations. Using these resources may help your organisation implement robust and compliant systems and processes, based on industry 'good practice'.

All WHS regulators, with the exception of those in Victoria and Western Australia have enacted the Australian Government's **Work Health and Safety Act 2011 No.137** and the **Work Health and Safety Regulations 2011 No.262**.

Disclaimer: The information contained in these pages is provided by way of indicative guidance only and SAI Global Limited does not represent that it is accurate or complete or suitable for any particular specific purposes. The onus remains with users to satisfy themselves of their requirements and needs for their own particular circumstances.

WHS Online Resources

SH&E Monitor

With over 10,000+ potential obligations with up to 1,500 changes a year, staying on top of your Safety, Health and Environment obligations can be overwhelming.

Our **Safety, Health and Environment (SH&E) Monitor** is a unique and comprehensive regulatory tracking and update service for SH&E compliance and risk management, that takes the headache out of managing your obligations.

The SH&E Monitor is focused on the impacts of regulatory change to specific business processes and provides you with guidance for their application.

SH&E Monitor is easily deployed across your organisation and gives staff the power to customise the service to meet their individual needs, based on their roles and responsibilities. Through email updates, staff are notified when changes in the SH&E regulatory environment occur.

Please contact the Regulatory Knowledge team for more detailed information on the SHE Monitor, including registering for a **free trial of our SHE Monitor Service**.
PHONE: 131 242
EMAIL: **enquiry.asiapac@saiglobal.com**

Environment, Health & Safety (EH&S) Compliance Management

SAI Global's **Cintellate™ EH&S Software** can help to improve your EH&S related business processes by allowing you to better utilize the collective intelligence of your staff. Complex objectives and targets are broken down into clearly defined processes and simple steps which are easier to comprehend and accomplish at an individual level. When these individual efforts are combined, they can achieve exceptional results.

It can help organisations to:

- Define a consistent model for all operational business processes
- Demonstrate an auditable trail of action in completing EH&S activities and tasks

- Provide real-time information for decision-making
- Report metrics and performance relative to organizational targets

Release staff from manual tasks so they can apply their expertise to higher value projects

Please contact the **Compliance Division** for more detailed information on the **Cintellate™ EH&S Software** available:
PHONE: 1300 513 107
EMAIL: enquiry.asiapac@saiglobal.com

WHS Online Training & Awareness

The SAI Global **Online Compliance & Ethics learning to improve compliance** provides information on WHS policies, procedures, values and best practice principles to widely dispersed employees and business partners consistently. Full tracking and reporting gives you proof of completion for audit purposes.

Please contact the **Compliance Division** for more detailed information on the OH&S training solutions available:
PHONE: 1300 513 107
EMAIL: enquiry.asiapac@saiglobal.com

The SAI Global **Environment, Health & Safety Software** provides a framework for managing EH&S performance as well as a central repository for all of your preventative and reactive data. Please contact the **Compliance Division** for more information on this software:
PHONE: 1300 513 107
EMAIL: enquiry.asiapac@saiglobal.com

Safety Management Plans and Safe Work Method Statements

Companies undertaking construction projects worth over $250,000 dollars are required to prepare Safe Work Method Statements. SAI Global Information Services supplies Safe Work Method Statements in two formats. There are collections of Safe Work Method Statements in WHS and OHS Management Safety Plans. Alternatively there are individual Safe Work Method Statements for specific types of activities.

Safety Management Plans and Safe Work Method Statements are based on the types of risk assessment techniques that are described in **AS/NZS ISO 31000:2009, Risk management – Principles and guidelines**.

The management safety plans and Safe Work Method Statements we supply are supplied in customised MS word templates.

Safety Management Plans

There are separate management plans for companies based in different States and Territories. Workplace health and safety regulators in Victoria and Western Australia have not adopted harmonized WHS laws. Consequently companies based in these States are required to prepared safe work method statements that are based on OHS Management Plans.

Workplace health and safety regulators in all other States and Territories have adopted harmonized WHS laws under the **Work Health and Safety Regulations Act 2011 No.137 and the Work Health and Safety Regulations 2011 No.262**. SAI Global has categorised these publications as WHS Management Plans

Work Health and Safety Management Plan (WHSMP)

The Work Health and Safety Management Plan (WHSMP), also commonly called a Site Safety Management Plan or Construction Site Safety Plan, includes all the foundation documents you need to safety and efficiently manage your site. Suitable for construction or earthmoving sites. A WHSMP is a requirement of the Work Health and Safety Regulations 2011 (s309, Part 6.4) for construction projects over $250,000.

50030 V1, Work Health and Safety Management Plan (WHSMP) is designed to be used by construction and/or earthmoving businesses with a requirement to establish a comprehensive site management plan. This provides a framework for you and your employees to behave in a responsible and safe manner.

OHS Management and WHS Management Plans contain essential information on:

- WHS Roles and Responsibilities
- SWMS Checklist
- Site Induction Checklist
- Plant Hazard Checklist
- Plant and Equipment Register
- Incident Report Form
- Emergency Plan
- Hazardous Work Modules

Workplace Safety Management Plans (WHSMP) is used by Companies in All States with the exception of Victoria and Western Australia.

A generic workplace safety management plan is available from SAI Global Information Services. We also supply separate WHS management plans for the industries below:

- **Contractors and Subcontractors**
- **Engineering Firms, Manufacturers/Suppliers of Industrial Products and Equipment**
- **Office, Retail and Property Businesses**
- **Trades (Electricians, Gas Fitters, Plumbers, Roofers, Carpenters and Painters)**
- **Warehousing and Service Industries**
- **Transport and Logistics**

Occupational Safety Management Plans (OHSMP) for Victorian and Western Australian Companies

SAI Global Information Services supplies a comprehensive **Occupational Health and Safety Management Plan** that could be used by companies operating in a wide variety of industries. There are also customised plans for the industries below:

- **Contractors and Subcontractors**
- **Engineering Firms, Manufacturers/Suppliers of Industrial Products and Equipment**
- **Office, Retail and Property Businesses**
- **Trades (Electricians, Gas Fitters, Plumbers, Roofers, Carpenters and Painters)**
- **Warehouse and Service Industries**
- **Transport and Logistics**

OH&S Management Plan (OHSMP)

The **OHS Management Plan** (OHSMP) is the Victorian version of the WHS Management Plan (WHSMP), as Victoria is not bound by the harmonised WHS laws. As a result, this plan is written according to the Occupational Health & Safety Act 2004 and Occupational Health & Safety Regulations 2007.

An **OHSMP**, also commonly called a Site Safety Management Plan or Construction Site Safety Plan, includes all the foundation documents you need to safety and efficiently manage your site. Suitable for construction or earthmoving sites, an OHSMP is a requirement for Principal Contractors or contractors with contracts valued at more than $250,000.

The **OHSMP** is supplied in fully customisable, MS Word template format. It includes all the foundation documents that you need to safely and efficiently manage your site, such as:

- OH&S Manual
- OH&S Site Management Plan
- OH&S Emergency Plan
- Hazardous works modules.

Safe Work Method Statements

Safe Work Method Statements (SWMS) are fully editable templates documenting processes for identifying and controlling different types of health and safety risks.

Each Safe Work Method Statement covers the areas below:

- Identify work that is high risk construction work
- Specify hazards relating to construction work
- Specify risks to health and safety associated with those hazards
- Describes how the risk control measures described in AS/NZS ISO 31000 can be implemented, monitored and reviewed.

SAI Global Information Services supplies over 500 safe work method statements covering different industries. The most commonly used SWMS are referenced in this guide. Some of these include:

- **Construction Work**
- **Plant Equipment and Machinery**
- **Electrical Work**
- **Concreting**
- **Roofing**
- **Hazardous Substances**
- **Steelwork**
- **Working At Heights**

Management Standards

Australian Workplace Management Standards

AS/NZS 4801:2001, Occupational health and safety management systems – Specification with guidance for use sets out requirements for an Occupational Health and Safety Management System (OHSMS). This Standard assists organisations with:

- clarification and registration of an OHSMS for certification;
- implementation, maintenance and improvement of an WHSMS;

- assurance and conformance with its stated WHS policy; and
- demonstrating compliance to WHS regulations.

Information on procedures that can be followed to develop, manage and implement a WHS management system to **AS/NZS 4801:2001, Occupational health and safety management systems – Specification with guidance for use** is included in **AS/NZS 4804:2001, Occupational health and safety management systems – General guidelines on principles, systems and supporting techniques.**

A step-by step guide to developing, modifying, implementing and reviewing WHS Management systems can be found in **HB 211-2001, Occupational health and safety management systems – A guide to AS 4801 for small business**.

International Workplace Management Standards

SR OHSAS 18001:2007, Occupational Health and Safety Management Systems – Requirements is an international Standard which defines requirements for an occupational health and safety management system, to enable an organisation to control its OH&S risks and improve its OH&S performance. The commentary to this Standard is included in **SR OHSAS 18002:2008, Occupational Health and Safety Management Systems – Guidelines for the Implementation of WHSAS 18001:2007**.

Auditing and Compliance

Auditing requirements for all types of management systems are included in **ISO 19011:2011, Guidelines for auditing management systems**.

ISO 19600:2014, Compliance management systems – Guidelines provides guidance for establishing, developing, implementing, evaluating, maintaining and improving an effective and responsive compliance management system within an organisation.

Risk Management

AS/NZS 31000:2009 and SA/SNZ HB 436:2013

Those requiring comprehensive information on risk management should follow guidelines set out in Purchasers of this product will receive **AS/NZS ISO 31000:2009, Risk management – Principles and guidelines** and **SA/SNZ HB 436:2013 (Guideline to AS/NZS ISO 31000:2009, Risk management guidelines – Companion to AS/NZS 31000:2009**. These products are also available as a **Set**.

Safe Work Method Statements prepared by those working in building, construction and related injuries should be based on the principles and practices described in the above publications. Those responsible for implementing risk management systems should prepare and implement risk management matrices. Detailed information on different types of risk management matrices are now included in **SA/SNZ HB 436:2013 (Guideline to AS/NZS ISO 31000:2009, Risk management guidelines – Companion to AS/NZS 31000:2009**.

Other Related Publications

- **SA/SNZ HB 89:2013, Risk management – Guidelines on risk assessment techniques**
- **HB 158:2010, Delivering assurance based on ISO 31000:2009 - Risk management - Principles and guidelines**
- **HB 327:2010, Communicating and consulting about risk**
- **IEC/ISO 31010 Ed 1.0, Risk management – Risk assessment techniques**

Regulatory Newsfeeds help identify Standards, legislation and regulation that impact your business which can be key to identifying and managing risk. Register for your Free Trial today.

PHONE: 131 242
EMAIL: info.regulatory@saiglobal.com

Recording Workplace Injuries

Workplace injuries can be recorded and coded by the following the information that is included in:

- **AS 1885.1-1990, Measurement of occupational health and safety performance – Describing and reporting occupational injuries and diseases (known as the National Standard for workplace injury and disease recording)**
- **AS 1885.1-1990 Supp 1-1991, Measurement of occupational health and safety performance - Describing and reporting occupational injuries and disease - Workplace injury and disease recording form (Supplement to AS 1885.1-1990)**
- **MP 58-1991, Workplace injury and disease recording Standard – Resource kit**

Information on methods used to calculate loss-time injuries are also included in these Standards.

Environmental Management Systems

AS/NZS ISO 14001:2004, Environmental management systems – Requirements with guidance for use specifies requirements for an Environmental Management System (EMS) to enable an organisation to develop and implement objectives which take into account requirements about significant environmental aspects. For information on how to receive certification to this Standard, please refer to **SAI Global Certification Schemes** section of this guide.

Useful information is also included in:

- **AS/NZS ISO 14004:2004, Environmental management systems – General guidelines on principles, systems and support techniques**
- **ISO 14031:2013, Environmental management - Environmental performance evaluation – Guidelines**
- **ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework**

 AS/NZS ISO 14001:2004 and **AS/NZS ISO 14004:2004** are also available in a **Set**.

Other Related Environmental Management Publications

- **AS ISO 14050-1999, Environmental management – Vocabulary**.
- **ISO 14044:2006, Environmental management - Life cycle assessment - Requirements and guidelines**
- **ISO/TR 14049:2012, Environmental management - Life cycle assessment - Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis**
- **AS/NZS 19011:2014, Guidelines for auditing management systems**

Plant Equipment

Detailed information on Standards and Safe Work Method statements for different types of plant equipment are included in this section of the guide. Those requiring information on legislative requirements for plant equipment can subscribe to our **SHE Monitor Alert Service** and **Regulatory Newsfeeds**

Machinery Safety

In June 2014 the Australian suite of machinery safety standards were revised align with information contained in International (ISO) and European (EN) Standards. All of the revised standards are included in the **AS 4024.1-2014, Safety Machinery** suite of standards. Those requiring an overview of the concepts described in the revised Standards should purchase a copy of **AS/NZS 4024.1100:2014, Safety of machinery – Application guide**.

The machinery safety standards listed below have not been revised and they are not included in the **AS 4024.1-2014, Safety Machinery** set of standards. The Standards referenced below are not specifically based on information that is included in International (ISO) and European (EN) Standards.

Machinery that is not guarded correctly may present entrapment hazards. Diagrams and dimensions indicating distances between persons and accessible parts of machinery are included in the Standards listed below:

- **AS 4024.1501-2006 (R2014), Safety of machinery - Design of safety related parts of control systems - General principles for design**
- **AS 4024.1502-2006 (R2014), Safety of machinery - Design of safety related parts of control systems - Validation**
- **AS 4024.2601-2008, Safety of machinery - Design of controls, interlocks and guarding - Two-hand control devices - Functional aspects and design principles**
- **AS 4024.2801-2008, Safety of machinery - Safety distances and safety gaps - Positioning of protective equipment with respect to the approach speed of parts of the human body**
- **AS 4024.3001-2009, Safety of machinery - Materials forming and shearing - Mechanical power presses**
- **AS 4024.3002-2009, Safety of machinery - Materials forming and shearing - Hydraulic power presses**
- **AS 4024.3101-2008, Safety of machinery - Materials cutting - Milling machines (including boring machines) - Safety requirements**
- **AS 4024.3301-2009, Safety of machinery - Robots for industrial environments - Safety requirements**
- **AS 4024.4-1998, Safeguarding of machinery - Installation and commissioning requirements for electro-sensitive systems - Pressure-sensitive devices** (Note: Requirements for light curtains used with machinery are described in this standard)

Risks Assessments on Machinery

Those responsible for designing, manufacturing, installing, operating and repairing machinery should undertake risk assessments by following the information contained in the Standards below:

- **AS/NZS 4024.1302:2014, Safety of machinery - Risk assessment - Reduction of risks to health from hazardous substances emitted by machinery - Principles and specifications for machinery manufacturers**
- **AS/NZS 4024.1303:2014, Safety of machinery - Risk assessment - Practical guidance and examples of methods** (Note: Risk assessment matrices for different types of machinery can be followed the information contained in this Standard)

The above standards are based on principles and techniques that are described in **AS/NZS ISO 3100:2009, Risk management – Principles and guidelines** and **SA/SNZ HB 436:2013 (Guidelines to AS/NZS ISO 31000:2009, Risk management guidelines – Companion to AS/NZS ISO 31000:2009**.

Programmable Controllers (PLC) for Machinery

Information on requirements for programmable controllers used with machinery is included in the Standards below:

- **AS 61508 series of Standards**
- **IEC 62061 series of Standards**

Electrical Safety Requirements for Machinery (Non-Hazardous Areas)

Low Voltage Machinery

Information on requirements for low voltage machinery is included in the Standards below:

- **AS/NZS 3000:2007, Electrical installations (known as the Australian/New Zealand Wiring Rules)**
- **AS 60204.1-2005, Safety of machinery - Electrical equipment of machines - General requirements**

High Voltage Machinery

Information on requirements for high voltage machinery is included in the Standards below:

- **AS 60204.11-2006, Safety of machinery - Electrical equipment of machines - Requirements for HV equipment for voltages above 1000 V a.c. or 1500 V d.c and not exceeding 36 kV**

Electrical Safety Requirements for Machinery – Hazardous Areas

Electrical equipment located in areas where flammable gases, or combustible dusts are located shall be zoned and installed by following the information contained in the Standards listed below. Electrical equipment used in all types of hazardous areas can be repaired by following the information that is included in **AS/NZS 3800:2012, Electrical equipment for explosive atmospheres – Repair and overhaul.**

Flammable Gases and Vapours

Information on requirements for flammable gases and vapours are covered in the following areas:

Zoning Hazardous Areas

- **AS/NZS 60079.10.1:2009, Explosive atmospheres - Classification of areas - Explosive gas atmospheres**

Installing Equipment

- **AS/NZS 60079.14:2009, Explosive atmospheres - Electrical installations design, selection and erection**
- **AS/NZS 60079.17:2009, Explosive atmospheres - Electrical installations inspection and maintenance**

Combustible Dusts (For example: Silos)

Information on requirements for combustible dusts is covered in the following areas:

Zoning Hazardous Areas

- **AS/NZS 60079.10.2:2011, Explosive atmospheres - Classification of areas - Combustible dust atmospheres**

Installing Equipment

- **AS/NZS 61241.14:2005, Electrical apparatus for use in the presence of combustible dust - Selection and installation**

Safe Work Method Statement

- **10307, Safe Work Method Statement – Construction – Plant – Machinery – Working Around SWMS**

Conveyors

Detailed information on safety and guarding requirements for conveyors is included in **AS 1755-2000, Conveyors – Safety requirements**. Conveyors used in mines may also need to be tested to **AS 4606-2012, Grade S fire resistant and antistatic requirements for conveyor belting and conveyor accessories.**

Power Presses

Safety and guarding requirements for different types of hydraulic and mechanical presses are included in **AS 1219-1994, Power presses – Safety requirements**.

Commonwealth and State Workplace Health and Safety Regulators may still require presses to conform to the requirements of this Standard.

Safety practices when using power presses should follow these Standards:

- **AS 4024.3001-2009, Safety of machinery – Materials forming and shearing – Mechanical power presses**
- **AS 4024.3002-2009, Safety of machinery – Materials forming and shearing – Hydraulic power presses**

Cranes, Hoists and Winches

Inspection, Alterations and Repairs

Information related to safety inspecting and maintenance of cranes can be found in:

- All Types of Cranes
  AS 2550.1-2011, Cranes, hoists and winches – Safe use – General requirements

- Scissor Lifts (Mobile Elevating Work Platforms, Elevating Work Platforms – Also Known as EWPs)
  AS 2550.10-2006, Cranes, hoists and winches - Safe use - Mobile elevating work platforms

- Bridge, Gantry and Portal Cranes
  AS 2550.3-2002, Cranes, hoists and winches - Safe use - Bridge, gantry, portal (including container cranes), jib and monorail cranes

- Mobile Cranes
  AS 2550.5-2002, Cranes, hoists and winches – Safe use – Mobile cranes

- Static and Mobile Tower Cranes
  AS 2550.4-2004, Cranes, hoists and winches – Safe use – Tower cranes

  - Self-Erecting Tower Cranes
    AS 2550.20-2005, Cranes, hoists and winches – Safe use – Self-erecting tower cranes

  - Vehicle Loading Cranes
    AS 2550.11-2004, Cranes, hoists and winches – Safe use – Vehicle-loading cranes

  - Vehicle Hoists
    AS/NZS 2550.9:1996, Cranes - Safe use - Vehicle hoists

Other types of equipment and units used with cranes should follow the information in:

- Building Maintenance Units
  AS 2550.13-1997, Cranes – Safe use – Building maintenance units
- Concrete Placing Units
  AS 2550.15-1994, Cranes – Safe use – Concrete placing equipment
- Mast Climbing Platforms
  AS 2550.16-1997, Cranes – Safe use – Mast climbing work platforms
- Stacker Cranes, Storage and Retrieval Machines
  AS 2550.6-1995, Cranes - Safe use - Guided storing and retrieving appliances
- Building Hoists
  AS 2550.7-1996, Cranes - Safe use - Builders' hoists and associated equipment

Designing, Manufacturing and Duty Ratings

All types of cranes, hoists and winches should be designed and manufactured to the requirements specified in **AS 1418.1-2002, Cranes, hoists and winches - General requirements**. The **AS 1418 suite of Standards** are published in series and cover requirements for commonly used cranes.

Specific requirements for safety and devices can be found in:

Lifting Devices

- **AS 4991-2004, Lifting devices**

Electrical Safety Requirements

- **AS 60204.1-2005, Safety of machinery – Electrical equipment of machines – General requirements**
- **AS/NZS 3100:2009, Approval and test specification – General requirements for electrical equipment**
- **AS 1418.12-1991, Cranes (including hoists and winches) – Crane collector systems**
- **AS 60947 series of switchgear and controlgear Standards**
- **IEC 60204-32 Ed 2.0, Safety of machinery - Electrical equipment of machines - Part 32: Requirements for hoisting machines**

Safe Work Method Statements

- **S8.2.13.0177, Safe Work Method Statement - Overhead Crane**
- **S813.0412, Safe Work Method Statement - Crane - Wharf Mounted**
- **10053, Safe Work Method Statement - Crane - Franna - Loading - Unloading Trucks SWMS**
- **10074, Safe Work Method Statement - Crane - Fishing Vessel - Operation SWMS**
- **10133, Safe Work Method Statement - Crane - Truck Mounted - Hiab SWMS**
- **10172, Safe Work Method Statement - Crane - Mobile - Operation**
- **10177, Safe Work Method Statement - Crane - Overhead – Bridge - Gantry**

- **10272, Safe Work Method Statement - Crane - Tower SWMS**
- **10416, Safe Work Method Statement - Crane - wharf mounted SWMS**
- **S8.1.12.0074, Safe Work Method Statement - Crane - fishing vessel**
- **S8.1.12.0117, Safe Work Method Statement - Gantry Crane**

Industrial Trucks (Forklifts)

Operating, Inspecting and Repairing

Detailed requirements for forklifts are included in the **AS 2359, Powered industrial trucks series**. Key operational and safety Standards within this Series are:

- **AS 2359.2-2013, Powered industrial trucks - Operations**
- **AS 2359.6-2013, Powered industrial trucks - Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks**

Those responsible for inspecting and repairing lifting devices used with forklifts can follow the information that is included in:

- **AS 4973-2001, Industrial trucks – Inspection and repair of fork arms in service and fork-lift trucks**
- **AS 2359.14-2005, Powered industrial trucks – Fork arms – Technical characteristics and testing**

Guarding and Risk Assessments

Guarding and general safety issues concerning forklifts can be reviewed by following the details that are included in the **AS 4024, Safety of Machinery series**. Risk assessments can be undertaken by following the information contained in:

- **AS/NZS 4024.1302:2014, Safety of machinery - Risk assessment - Reduction of risks to health from hazardous substances emitted by machinery - Principles and specifications for machinery manufacturers**
- **AS/NZS 4024.1303:2014, Safety of machinery – Risk assessment – Practical guidance and examples of methods**

Design and Manufacture

Manufacturing details for forklift trucks are described in different **European** (also known as EN and CE) Standard. **AS 2359.1-1995, Powered industrial trucks – General requirements** can be used to assess requirements for older types of industrial trucks.

Engines

LP gas systems used with forklifts are described in **AS 4983-2010, Gas fuel systems for forklifts and industrial engines**.

Operating in Hazardous Areas

Those responsible for assessing requirements for industrial trucks used in areas where flammable gases/vapours or combustible dusts may be present should not follow the information that is included in **AS 2359.12-1996, Powered industrial trucks - Hazardous areas**. Please see **Electrical Safety Requirements for Machinery – Hazardous Areas** section in this guide for more information on this topic.

Batteries Used With Forklifts

Lead acid traction batteries used with forklifts should be installed by following the information contained in **AS 2402.1.2-2005, Traction batteries - Lead-acid - Vented cells - Installation and usage**.

Safe Work Method Statements

There are number of Safe Work Method Statements available for different categories of forklifts:

- **10109, Safe Work Method Statement - Forklift - LPG SWMS**
- **10110, Safe Work Method Statement - Forklift Maintenance SWMS**
- **10111, Safe Work Method Statement - Forklift – Petrol - Diesel SWMS**
- **10112, V5 Safe Work Method Statement - Forklift – Electric – non-pedestrian**
- **10283, Safe Work Method Statement - Forklift - Loading - Unloading Trucks SWMS**
- **S8.1.12.0111, Safe Work Method Statement - Forklift (petrol/diesel)**

Earth-Moving Machinery

European and **International** Standards are commonly used to design and manufacture earth-moving machinery. Earth-moving machinery supplied with attachments used on cranes may be classified as 'special purpose' cranes. If this the case, earth-moving machinery can be designed by following the information that is included in **AS 1418.8-2008, Cranes, hoists and winches - Special purpose appliances**.

Repairing Wheels and Rims information can be found in **AS 4457, Earth Moving Machinery Series**

Guarding and Safety Requirements

Guarding and safety issues can be assessed by following the information contained in the AS 4024 series of Standards. Risks assessments can prepared and completed by following the information contained in:

- **AS/NZS 4024.1302:2014, Safety of machinery - Risk assessment - Reduction of risks to health from hazardous substances emitted by machinery - Principles and specifications for machinery manufacturers**
- **AS/NZS 4024.1303:2014, Safety of machinery - Risk assessment - Practical guidance and examples of methods**

Safety requirements for tractors used in agriculture and related industries can also be assessed by following the details that are included in the **AS/NZS 2153, Tractors and machinery for agriculture and forestry - Technical means for ensuring safety Series**.

Protective Structures

Protective structures used with different types of earth-moving machinery can be designed by following the information contained in:

- **Roll Over Protective Structures (ROPS)**
  AS 2294.1-1997, Earth-moving machinery - Protective structures - General and **AS 1636, Tractors – Roll-over Protective Structures series**

- **Fall Over Protective Structures (FOPS)**
  ISO 3449:2005, Earth-moving machinery - Falling-object protective structures - Laboratory tests and performance requirements

- **Extra Low Voltage Wiring for Earth-moving Machinery Used On Mines**
  AS 4242-1994, Earth-moving machinery and ancillary equipment for use in mines - Electrical wiring systems at extra-low voltage

- **Repairing Wheels and Rims Used With Earth-moving Machinery**
  AS 4457, Earth Moving Machinery series of Standards

- **Brakes Used With Earth-moving Machinery**
  AS 2958, Earth Moving Machinery series of Standards

Safe Work Method Statements

SWMS publications to help with earth-moving machinery include:

- **Safe Work Methods for Excavators**
- **Safe Work Methods for Tractors**
- **S8.1.12.0085, Safe Work Method Statement - Earth moving equipment maintenance**

Pressure Equipment

Australian Standards and Safe Work Method Statements for different types of pressure equipment (including gas cylinders) are included below:

Pressure Vessels

Pressure vessel requirements can be found in the following areas:

Risk Assessments

- **AS 4343-2005, Pressure equipment – Hazard levels**

Design and Manufacturing

- **AS/NZS 1200:2000, Pressure equipment**
- **AS 1210-2010, Pressure vessels**
- **AS 1228-2006, Pressure equipment – Boilers**

Inspecting

- **AS 4037-1999, Pressure equipment - Examination and testing**
- **AS 2593-2004, Boilers - Safety management and supervision systems**

Welding

- **AS/NZS 3992:1998, Pressure equipment – Welding and brazing qualification**

Non-Destructive Tests

- **AS 4037-1999, Pressure equipment – Examination and testing**

Safe Work Method Statements

- **10004, Safe Work Method Statement - Air Compressor - Portable - Petrol/Diesel**
- **10376 V4, Safe Work Method Statement - Air Compressor – Portable - Electric**
- **10028, Safe Work Method Statement - Boiler Maintenance SWMS**

Gas Cylinders

Gas cylinder requirements can be found in the following areas:

Risk Assessment

- **AS 4343-2014, Pressure equipment – Hazard levels**

Design/Manufacturing

- **AS 2030, The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gase series**

Inspection and Refilling Gas Cylinders

Certified gas cylinder test stations should inspect and refill gas cylinders. Detailed information on requirements for gas cylinder test stations are included in the **AS 2337, Gas cylinders test stations series**.

SAI Global Assurance Services provides a range of **Pressure Equipment Products Certification Schemes**.

Storing Gases

See the **Dangerous Goods** section of this guide for information on storage and handling requirements for different types of gases

Safe Work Method Statements

- **10213, Safe Work Method Statement - Refrigerant Gas – Safe Use SWMS**

Gas Piping Systems

Gas piping system requirements can be found in the following Standards:

- **AS 4289-1995, Oxygen and acetylene gas reticulation systems**
- **AS 2885, Pipelines - Gas and liquid petroleum series**

Power Presses

Safety, Guarding and Risk Assessments

Safety and guarding requirements for different types of presses are included in **AS 4024.1-2014 Series, Safety of Machinery.**

Risk assessment techniques applying to all types of machinery (including presses) are included in the Standards below:

- **AS/NZS 4024.1302:2014, Safety of machinery - Risk assessment - Reduction of risks to health from hazardous substances emitted by machinery - Principles and specifications for machinery manufacturers**
- **AS/NZS 4024.1303:2014, Safety of machinery - Risk assessment - Practical guidance and examples of methods**

Safe Work Method Statements

There are Safe Work Method Statements for **hydraulic**, **drill** and **brake presses**.

Lifts, Elevators and Escalators

Information on requirements for different types of lifts is included in the Standards below:

Australian, European US (ASME) Standards

Companies who design and manufacture different types of lifts are primarily based on overseas and they commonly arrange compliance to **European** and US (**ASME**) Standards.

Safety, Guarding and Risk Assessments

Safety and guarding requirements for lifts are included in the **AS 4024.1-2014 Series, Safety of Machinery** risk assessments can be prepared and completed by following the information contained in:

- **AS/NZS 4024.1302:2014, Safety of machinery - Risk assessment - Reduction of risks to health from hazardous substances emitted by machinery - Principles and specifications for machinery manufacturers**
- **AS/NZS 4024.1303:2014, Safety of machinery - Risk assessment - Practical guidance and examples of methods**

Electrical Safety

Electrical safety requirements for lifts, escalators and elevators can be determined by following the information that is included in the Standards below:

- **AS/NZS 3000:2007, Electrical installations (known as the Australian/New Zealand Wiring Rules)**
- **AS 60204.1-2005, Safety of machinery – Electrical equipment of machines – General requirements**
- **AS 60947 series of switchgear and controlgear Standards**

Standards for Different Types of Lifts, Elevators and Escalators

Standards for different types of lifts, elevators and escalators are covered in the following areas:

All Types of Lifts
- **AS 1735.1-2003, Lifts, escalators and moving walks - General requirements**
- **AS 1735.11-1986, Lifts, escalators and moving walks (known as the SAA Lift Code) - Fire-rated landing doors**

Service Lifts
- **AS 1735.5-2015, Lifts, escalators and moving walks – Escalators and moving walks – Service Lift**

Disability Access Lifts
- **AS 1735.12-1999, Lifts, escalators and moving walks - Facilities for persons with disabilities**

Lifts for Residential Premises
- **AS 1735.7-1998, Lifts, escalators and moving walks - Stairway lifts**
- **AS 1735.8-1986, Lifts, escalators and moving walks (known as the SAA Lift Code) - Inclined lifts**

Lifts Used For Transporting Industrial (Plant) Equipment
- **AS 1735.9-1994 Lifts, escalators and moving walks - Special purpose industrial lifts**

Hazardous Areas

Repairing Explosion Protected Equipment

Specific requirements for the repair and overhaul, reclamation and modification of equipment designed for use in explosive atmospheres can be found in **AS/NZS 3800:2012, Electrical equipment for explosive atmospheres – Repair and overhaul**. Additional information can also be found in **IEC 60079-19 Ed. 3.0, Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation**.

For specific information on explosion protection equipment used in hazardous areas:

Flammable Gases and Vapours Zoning Equipment

- **AS/NZS 60079.10.1:2009, Explosive atmospheres – Classification of areas – Explosive gas atmospheres**

Installations

- **AS/NZS 60079.14:2009, Explosive atmospheres – Electrical installations, design, selection and erection**

- **AS/NZS 60079.17:2009, Explosive atmospheres – Electrical installations, inspection and maintenance (IEC 60079-17, Ed.4.0(2007) MOD)**

- **AS/NZS 61241.14:2005, Electrical apparatus for use in the presence of combustible dust – Selection and installation (IEC 61241-14, Ed.1.0(2004) MOD)**

Explosion Protected Equipment – Combustible Dusts Zoning Equipment

- **AS/NZS 60079.10.2:2011, Explosive atmospheres – Classification of areas – Combustible dust atmospheres**

Amusement Devices

Information on the design, construction and risk assessment of amusement rides and devices can be found in **AS 3533.1-2009, Amusement rides and devices - Design and construction**.

Specific information on amusement rides and devices can also be found in:

- **Operating, Maintaining Servicing and Inspection**
  AS 3533.2-2009, Amusement rides and devices – Operation and maintenance and **AS 3533.3-2003 (R2013), Amusement rides and devices – In-service inspection**

- **Electrical Installations**
  AS/NZS 3002:2008, Electrical installations – Shows and carnivals

- **Jumping Castles**
  AS 3533.4.1-2005, Amusement rides and devices - Specific requirements - Land-borne inflatable devices

- **Water Slides**
  AS 3533.4.5 (Int)-2012, Amusement rides and devices - Specific requirements - Waterborne inflatables

- **Contained Play Facilities**
  AS 3533.4.2-2013, Amusement rides and devices - Specific requirements - Contained play facilities

- **Roller Coasters**
  AS 3533.4.3-2007, Amusement rides and devices - Specific requirements - Roller coasters

- **Go Karts**
  AS 3533.4.4-2011, Amusement rides and devices - Specific requirements - Concession go-karts

Working at Heights

Those working in construction and related industries are commonly working at heights. This section of the guide provides information on standards and safe work method statements that can be used to manage these types of risks. Those requiring information on legislative requirements for employees working at heights can subscribe to our **SHE Monitor Alert Service** and **Regulatory Newsfeeds**.

Storage Racks

Detailed information on the requirements for the design, fabrication and erection tolerances, test methods, operation and maintenance of steel storage racking in the limit states method is included in **AS 4084-2012, Steel storage racking**.

AS 4084-2012, Steel storage racking Standard applies to adjustable static pallet racking made of cold-formed or hot-rolled steel structural members. It covers racking installed within a building, outside a building, and racking that forms part of the frame of the building.

Scaffolding

Detailed information on methods used to erect, dismantle and install scaffolding systems is included in **AS/NZS 4576:1995, Guidelines for scaffolding**.

Scaffolding classified with light, medium and heavy duty ratings should be designed and manufactured to the **AS/NZS 1576 series of Standards**.

Platforms used by those working at heights in residential buildings should be designed and manufactured by following the information contained in **AS 6001-1999, Working platforms for housing construction**.

Safe Work Method Statements

There a number of Safe Work Methods for **scaffolders** and **riggers**.

Fall Arrest Devices, Harnesses, Lanyards, Anchor Points and Safety Nets

SAI Global Information Services also supplies Safe Work Method Statements for fall arrest devices and anchorage points. See details below.

Selecting Fall Arrest Devices, Harnesses and Lanyards

Persons working at heights commonly use harnesses, fall arrest devices and lanyards. Detailed information on methods used to inspect these types of devices are included in **AS/NZS 1891.4:2009, Industrial fall-arrest systems and devices – Selection, use and maintenance**. Manufacturing details and test methods for products tested to this standard are included in:

Fall Arrest Devices

- **AS/NZS 1891.3:1997, Industrial fall-arrest systems and devices – Fall-arrest devices**

Safe Work Method Statements

- **10229, Safe Work Method Statement – Harness System – Fall Arrest SWMS**

Harnesses and Lanyards

- **AS/NZS 1891.1:2007, Industrial fall-arrest systems and devices – Harnesses and ancillary equipment**

Horizontal Lifelines

- **AS/NZS 1891.2:2001, Industrial fall-arrest systems and devices – Horizontal lifelines and rail systems**
- **AS/NZS 1892.2 Supp 1:2001, Industrial fall-arrest systems and devices - Horizontal lifeline and rail systems - Prescribed configurations for horizontal lifelines (Supplement to AS/NZS 1891.2:2001)**

Roof Anchorage Points

- **AS/NZS 5532:2013, Manufacturing requirements for single-point anchor device used for harness-based work at height**

Safe Work Method Statements

- **10327 V2, Safe Work Method Statement - Harness – Anchor Point Installation SWMS**

Safety Nets Use To Protect Persons Falling From Heights

There are no Australian Standards for these types of products. However information is included in the **EN 1263, Temporary Works Equipment** suite of European Standards.

Fixed Ladders, Platforms and Walkways

- **AS 1657-2013, Fixed platforms, walkways, stairways and ladders – Design, construction and installation**

Portable Ladders (Including Step Ladders)

Portable ladders can be selected by following information contained in **AS/NZS 1892.5:2000**, Portable ladders – Selection, safe use and care. Manufacturing requirements for ladders manufactured from different types of materials are listed below:

- **Metals – AS/NZS 1892.1:1996, Portable ladders – Metal**
- **Timbers – AS 1892.2:1992, Portable ladders – Timber**
- **Plastics – AS/NZS 1892.3:1996, Portable ladders – Reinforced plastics**

Safe Work Method Statements

- **10153, Safe Work Method Statement – Ladders – Safe use SWMS**

Edge Protection Systems

Guidelines for edge protection for residential and non-residential buildings are outlined in:

Residential Buildings

- **AS/NZS 4994 series of Standards**

Non-Residential Buildings

- **AS 1657-2013, Fixed platforms, walkways, stairways and ladders – Design, construction and installation**

Safe Work Method Statements

- **10228 V4 Safe Work Method Statement – Roof – Edge Protection**

Ropes

Industrial Ropes

Industrial ropes should be selected and maintained by following the information contained in **AS/NZS 4488.2:1997, Industrial rope access systems - Selection, use and maintenance**. Manufacturing requirements for industrial ropes are included in **AS/NZS 4488.1:1997, Industrial rope access systems – Specifications**.

Safe Work Method Statement

The SWMS that relates to this area is:

- **10142 V5, Safe Work Method Statement – Rope Access – Industrial**

Fibre Ropes for Rescue Lines

Fibre ropes for rescue lines can be maintained by following information contained in **AS 4142.1-1993, Fibre ropes – Care and safe usage**. Manufacturing requirements for these types of ropes are included in **AS 4142.3-1993, Fibre ropes – Man-made fibre ropes for static life rescue lines**. Test methods for ropes tested to the standard are included in the **AS 4143 Series of Standards**.

Security Industry

Information on requirements for the operation and management organisation providing protective security services is included in **AS/NZS 4421:2001, Guard and personal security services**.

Closed Circuit Television Systems

Information for operators of Closed Circuit Television (CCTV) systems is included in **AS 4806.1-2006, Closed circuit television (CCTV) – Management and operation**. Also included in this Standard is information on training and screening requirements for personnel operating these types of systems.

Signalling and performance requirements for different types of CCTV systems are outlined in:

- **AS 4806.2-2006, Closed circuit television (CCTV) – Application guidelines**
- **AS 4806.3-2006, Closed circuit television (CCTV) – PAL signal timings and levels**
- **AS 4806.4-2008, Closed circuit television (CCTV) – Remote video**

The **AS 4806, Closed circuit television (CCTV) Series** are all also available as **AS 4806 Set-2008**.

Intruder Alarms

Intruder alarm systems should conform to the requirements that are included in the **AS/NZS 2201, Intruder alarm systems Series** which are also available as **AS/NZS 2201 Set:2008**.

Security classification requirements for different types of intruder alarm systems and details on recommended environmental conditions for control rooms operating intruder alarm systems are included in **AS/NZS 2201.1-2007, Intruder alarm systems – Clients premises – Design, installation, commissioning and maintenance**.

Automatic Fire Detection and Emergency Intercommunication

Automatic fire detection systems located in different types of buildings should be designed, installed, operated and commissioned by following the information that is included in the publications listed below:

- **AS 1670.1-2004, Fire detection, warning, control and intercom systems - System design, installation and commissioning – Fire**
- **AS 1670.3-2004, Fire detection, warning, control and intercom systems – System design, installation and commissioning – Fire alarm monitoring**

Sound systems used with fire detection and EWIS systems should conform to the requirements that are outlined in **AS 1670.4-2004, Fire detection, warning, control and intercom systems - System design, installation and commissioning - Sound systems and intercom systems for emergency purposes**. Recommended noise levels for sound systems used with these types of systems are also included in this Standard.

Control equipment used with automatic fire detection and EWIS systems should be tested to the **AS 4428, Fire detection, warning, control and intercom systems Series**.

Fire Safety

Information on key publications related to fire safety is included in this section of the guide. Other Standards can also be found by referring to the **Protection against fire** subject area on the Infostore.

Evacuating Buildings
- **AS 3745-2010, Planning for emergencies in facilities**
- **AS 4083-2010, Planning for emergencies – Health care facilities**

Fire Safety for HVAC Systems
- **AS/NZS 1668.1:1998, The use of ventilation and airconditioning in buildings - Fire and smoke control in multi-compartment buildings**

Maintaining Essential Services
- **AS 1851-2012, Routine service of fire protection systems and equipment**

Fire Safety Audits
- **AS 4655-2005. Fire safety audits**

Location of Extinguishers
- **AS 2444-2001, Portable fire extinguishers and fire blankets - Selection and location**

Emergency Lighting
- **AS 2293.1-2005, Emergency escape lighting and exit signs for buildings - System design, installation and operation**
- **AS/NZS 2293.2:1995, Emergency evacuation lighting for buildings - Inspection and maintenance**

Safe Work Method Statements

There a number of **Safe Work Method Statements** for those working with different types of fire safety equipment

Testing and Certifying Fire Protection Equipment

SAI Global Product Services provides testing and certification schemes that are ensure manufacturers of fire protection equipment comply with relevant Standards. Please contact **SAI Global Product Services** if further information on these schemes is required.

Air Quality

Indoor air quality and contaminant levels for buildings can be determined by following the engineering methods described in **AS 1668.2-2012, The use of ventilation and airconditioning in buildings – Mechanical ventilation in buildings**. This Standard is based on determining airflow levels by using dilution indices. For information on minimum design requirements for natural ventilation systems for enclosures and requirements for the ventilation of car parks can be found in **AS 1668.4-2012, The use of ventilation and airconditioning in buildings – Natural ventilation of buildings**.

Slip Resistance

Pendulum and ramp slip resistance levels for areas located in different types of buildings can be determined by using the information that is included in HB 198:2014, Guide to the specification and testing of slip resistance of pedestrian surfaces.

Ergonomics and Office Environments

Ergonomics can be broadly defined as the 'study and collection of data relating to people and their interactions with workplace environments'.

Concepts covering anthropometrics (physical sizing of the human body) and ergonomics are covered in **HB 59-1994, Ergonomics – The human factor – A practical approach to work systems design**. This Handbook deals with human physical capabilities, and physiological and work organizational factors. It also includes tables listing anthropometric estimates for British adults. Detailed information on commonly used display systems used with equipment and machinery located in workplaces is also included in **HB 59-1994**.

Office Environments

Guidelines that should be followed when using the following types of equipment are included in:

- **Workstations –Visual Display Units (VPU)**
  AS 3590.1-1990, Screen-based workstations – Visual display units
- **Workstations – Input devices such as keyboards and mouses**
  AS 3590.3-1990, Screen-based workstations – Input devices
- **Workstations – Panel systems**
  AS/NZS 4443:1997, Office-panel systems – Workstations
- **Office Desks**
  AS/NZS 4442:1997, Office desks
- **Office Chairs**

  AS/NZS 4438:1997, Height adjustable swivel chairs

The **ISO 9241-300, Ergonomics of human-system interaction Series** cover requirements for new types of technologies and tasks that may be undertaken in different types of workstations using light-emitting diodes (LED), organic light-emitting diodes (OLED) and surface-condition electron-emitter displays (SED) technologies. The European editions of these Standards are included in the **I.S. EN ISO 9241-300 Series**.

Detailed information on methods that can be used to assess visual ergonomic requirements for different types of display systems is included in **ISO 9241-304:2008, Ergonomics of human-system interaction – Part 304: User performance test methods for electronic visual displays**.

Office environments should also have appropriate lighting levels, please see the **Lighting** section for more information.

Ventilation Standards

Information on ventilation levels for computer rooms and examples illustrating methods used to determine airflow levels for offices found in **AS 1668.2-2002, The use of ventilation and airconditioning in buildings – Ventilation design for indoor air contaminant control**.

Computer Control Centres

Unique environmental and ergonomic conditions apply to computer rooms and control centres and information on different environmental classes for these areas is included in **AS 2834-1995, Computer accommodation**. More recent information on recommended lighting, ventilation and acoustic requirements for different types of control centres is included in **I.S. EN ISO 11064-6:2005, Ergonomic design of control centres – Part 6: Environmental requirements for control centres**.

Hot and Cold Environments

Persons working in hot and cold environments can adopt different types of management strategies described in:

- **ISO 11079:2007, Ergonomics of the thermal environment - Determination and interpretation of cold stress when using required clothing insulation (IREQ) and local cooling effects** (identical to **I.S. EN ISO 11079:2007**)
- **ISO 12894:2001, Ergonomics of the thermal environment – Medical supervision of individuals exposed to extreme hot or cold environments** (identical to **I.S. EN ISO 12894:2001**)
- **ISO 15743:2008, Ergonomics of the thermal environment – Cold workplaces – Risk assessment and management** (identical to **I.S. EN ISO 15743:2008**)
- **I.S. EN 342:2004, Protective Clothing – Ensembles And Garments For Protection Against Cold**
- **ASTM F2732-09, Standard Practice for Determining the Temperature Ratings for Cold Weather Protective Clothing**
- **ISO 7243:1989, Hot environments – Estimation of the heat stress on working man, based on the WBGT-index (wet bulb globe temperature)**
- **ISO 15265:2004, Ergonomics of the thermal environment – Risk assessment strategy for the prevention of stress or discomfort in thermal working conditions**

Safety Signs

Workplace Safety Signs

Information on the types of safety signs and symbols described below is included in **AS 1319-1994, Safety signs for the occupational environment** and **ISO 7010:2011, Graphical symbols - Safety colours and safety signs - Registered safety signs**:

- Regulatory Signs
- Hazard Signs
- Emergency Information Signs
- Fire Signs
- Workplace Health and Safety Symbols

All signs are required to have colours conforming to the Munsell System that is included in **AS 2700-2011, Colour Standard for general purposes**. The hard copy edition of this Standard also includes a colour chart. A table listing designations for colours used to create different types of safety signs are included in **AS 1319-1994**.

Reflective properties for colour signs can be determined by following the methods described in **AS/NZS 1906.1:2007, Retroflective materials and devices for road traffic control purposes – Retroflective sheeting**.

AS 1318-1985, Use of colour for the marking of physical hazards and the identification of certain equipment in industry (known as the SAA Industrial Safety Colour Code) (incorporating Amdt 1) establishes requirements for the use of certain colours for the following:

- Marking of physical hazards
- Identification of equipment and machinery that may cause hazards in workplaces
- General signs

Typically, the principles described in this Standard apply in cases where different types of plant equipment (e.g. industrial trucks) may be used in workplaces. This Standard also includes a table listing different types of safety colours which are included in the colour chart that is supplied with the hard copy edition of **AS 2700-2011**.

For information on emergency escape exit signs, see the section **Lighting - Emergency Escape Lighting**.

Symbols for Pipelines, Conduits and Ducts

Pipelines, conduits and ducts should be marked by following the practices described in **AS 1345-1995, Identification of the contents of pipes, conduits and ducts**. The colours described in this Standard are available in the colour chart that is supplied with the hard copy edition of **AS 2700-2011**.

Symbols for Equipment and Machinery

There are a number of symbols that are used to designate requirements for specific types of equipment and machinery. These symbols can also be used to represent risks associated with the use of different types of equipment and machinery. A comprehensive overview of symbols used to represent requirements for different categories of equipment and machinery is included in **AS 60417, Graphical symbols for use on equipment Series**.

Electrical Equipment

A summary of common symbols used to represent requirements for different types of electrical equipment is included in **AS/NZS 3000:2007, Electrical installations (known as the Australian/New Zealand Wiring Rules)**. A complete list of electrical symbols is included in the **AS/NZS 1102, Graphical symbols for electrotechnical documentation Series**.

Symbols representing requirements for different types of industrial and related types of electrical equipment are included in **AS/NZS 3100:2009, Approval and test specification - General**

requirements for electrical equipment and **AS 60204.1-2005, Safety of machinery – Electrical equipment of machines – General requirements (IEC60204-1, Ed. 5 (FDIS) MOD)**.

Information on marking and labelling requirements for different types of household and related types of electrical equipment are included in **AS/NZS 60335.1:2002, Household and similar electrical appliances – Safety – General requirements (IEC 60335-1 Ed 4.2, MOD)** and **AS 60417.2.5-2004, Graphical symbols for use on equipment -- Home electric appliances**.

Machinery

Machinery used in workplaces that require guarding should be supplied with appropriate marking requirements, symbols and instruction manuals which can be found in **AS 4024.1202-2006, Safety of machinery – General principles – Technical principles**. Similar information is included in **ISO 12100:2010, Safety of machinery – General principles for design – Risk assessment and risk reduction**.

Symbols for emergency stop buttons and actuating devices used with different types of machinery are included in **AS 60417.1-2004, Graphical symbols for use on equipment – Overview and application**. A copy of a symbol for emergency stop buttons is also included in **AS 4024.1604-2006, Safety of machinery – Design of controls, interlocks and guarding – Emergency stop – Principles for design**. Similar information is included in **ISO 13850:2006, Safety of Machinery – Emergency Stop – Principles for Design**. A table listing recommended colours and symbols for pushbuttons is included in **HB 59-1994, Ergonomics - The human factor - A practical approach to work systems design**.

Road Safety (including Off-Street Parking) Signs

Detailed information on different types of road safety symbols is included in the **AS 1742, Manual of uniform traffic control devices Series**. These Standards are also available as **AS 1742 Set-2014, Manual of uniform control traffic devices set**.

Information on location and sizing details for commonly used road safety signs are included in **AS 1742.2-2009, Manual of uniform traffic control devices – Traffic control devices for general use**. An index of road safety symbols can be found in **AS 1742.1-2014, Manual of uniform traffic control devices – General introduction and index of signs**. Lettering and font requirements for these types of symbols are included in **AS 1744-1975, Forms of letters and numerals for road signs (known as Standard alphabets for road signs)**.

Signs used in off-street parks should be located by following the details described in **AS/NZS 2890.1-2004, Parking facilities – Off-street car parking**. Information on regulatory signs used in off-street car parks can also be found in:

- **AS 1742.1-2003, Manual of uniform traffic control devices - General introduction and index of signs**
- **AS 1742.2-2009, Manual of uniform traffic control devices - Traffic control devices for general use**
- **AS 1742.10-2009, Manual of uniform traffic control devices – Pedestrian control and protection**

Public Information Symbols

Public Spaces and Buildings

Standards Australia has not established any Standards for symbols that may be used in public spaces and buildings. However, this information is included in **ISO 7001:2007, Graphical symbols – Public information symbols**. The types of symbols represented in this Standard can be prepared by following the principles and practices described in **ISO 22727:2007, Graphical symbols - Creation and design of public information symbols – Requirements**.

Parks

Signs and markers used on walking tracks can be classified by following the methods described in **AS 2156.1-2001, Walking tracks – Classification and signage**. Colours used to produce these types of signs are listed in this Standard. Examples of these colours are included in the colour chart that is supplied with the hard copy edition of **AS 2700-2011**.

Symbols used to provide direction to persons used on walking tracks are also included in **ISO 7001:2007**.

Disabled Access Signs

Signs used to represent facilities used by persons with disabilities are included in **AS 1428.1-2009, Design for access and mobility – General requirements for access – New building work** and **AS 1428.5-2010, Design for access and mobility – Communication for people who are deaf or hearing impaired**.

Line Marking

Warehouses and distribution centres should be line marked by following the details that are included in **AS 1318-1985, Use of colour for the marking of physical hazards and the identification of certain equipment in industry (known as the SAA Industrial Safety Colour Code) (incorporating Amdt 1)**.

Personal Protective Equipment (PPE)

Testing and Certifying Personal Protective Equipment

SAI Global Product Services provides testing and certification schemes to ensure manufacturers of protective clothing comply with relevant Standards. Please contact SAI Global Product Services **product@saiglobal.com** if further information on certification schemes is required.

Respirators and Masks

Respirators manufactured to **AS/NZS 1716:2012, Respiratory protective devices** should be selected and maintained by following the information contained in **AS/NZS 1715:2009, Selection, use and maintenance of respiratory protective equipment.**

Manufacturing requirements and test methods for disposable masks used by healthcare workers are included in **AS 4381-2002, Single-use face masks for use in health care.** Imported face masks may also have been tested to **EN 14683:2014, Medical Face Masks - Requirements and Test Methods**.

Eye Protectors

Eye protectors should be selected by following the information that is included in **AS/NZS 1336:2014, Eye and face protection - Guidelines**. Manufacturing requirements for eye protectors providing different levels of protection are included in the **AS/NZS 1337, Personal eye protection series of Standards**.

Welding filters should be tested to **AS/NZS 1338.1:2012, Filters for eye protectors - Filters for protection against radiation generated in welding and allied operations**. Filters providing protection against different types of ultraviolet and infra-red radiation levels are tested to the Standards below:

- **AS/NZS 1338.2:2012, Filters for eye protectors - Filters for protection against ultraviolet radiation**
- **AS/NZS 1338.3:2012, Filters for eye protectors - Filters for protection against infra-red radiation**

Helmets

Protective helmets used in different industries can be selected by following the information contained in **AS/NZS 1800:1998, Occupational protective helmets – Selection, care and use**. Manufacturing requirements for protective helmets are included in **AS/NZS 1801:1997, Occupational protective helmets**.

There are also **European manufacturing Standards** for protective helmets that may be used in different industries.

Helmets used by firefighters should be tested to **AS/NZS 4067:2012, Protective helmets for structural firefighting**.

Planning for Emergencies

Healthcare Facilities

AS 4083-2010, Planning for emergencies - Healthcare facilities sets out the procedures for healthcare facilities in the planning for, and responses to, internal and external emergencies. It also specifies response colour codes for use in a specific emergency.

Non-Healthcare Buildings

AS 3745-2010, Planning for emergencies in facilities outlines the minimum requirements for the establishment, validation and implementation of an emergency plan for a facility to provide for the safety of occupants of that facility and its visitors leading up to, and during an evacuation.

Emergency Escape Lighting

Emergency luminaires (also known as exit signs) used in buildings should be designed, installed, located and maintained by following the information that is included in **AS 2293.1-2005, Emergency escape lighting and exit signs for buildings - System design, installation and operation** and **AS/NZS 2293.2:1995, Emergency evacuation lighting for buildings - Inspection and maintenance**.

An example of the 'Running Man' exit sign is included in **AS 2293.3-2005, Emergency escape lighting and exit signs for buildings – Emergency escape luminaires and exit signs**.

Protective Clothing

Testing and Product Certification Schemes for Protective Clothing

SAI Global Product Services provides testing and certification schemes to ensure manufacturers of protective clothing comply with relevant Standards. Please contact **SAI Global Product Services** if further information on certification schemes is required.

Protective Clothing

Protective clothing should be selected by following the information contained in **AS/NS 4501.1:2008, Occupational protective clothing - Guidelines on the selection, use, care and maintenance of protective clothing**. High visibility clothing should be selected by following the information that is included in **AS/NZS 4602, High visibility safety garments series of Standards**.

High Visibility Clothing

Manufacturing requirements for high visibility clothing are included in **AS/NZS 1906.4:2010, Retroreflective materials and devices for road traffic control purposes - High-visibility materials for safety garments**.

Imported clothing that has only been tested to the European Standard **EN ISO 20471:2013** should not be used if it has not been tested to **AS/NZS 1906.4:2010**.

Those working in all areas (with the exception of fire fighters) should select high visibility clothing by following the information that is included in **AS/NZS 4602.1:2011, High visibility safety garments – Garments for high risk applications**.

Sun Protective Clothing

Sun protective clothing should be manufactured by following the details contained in **AS/NZS 4399:1996, Sun protective clothing – Evaluation and classification**. High visibility sun protective clothing should also be tested to **AS/NZS 1906.4:2010**.

Clothing Protected Against Heat and Flame

Clothing designed to protect persons from heat and flame can be selected by following the information that is included in **AS/NZS ISO 2801:2008, Clothing for protection against heat and flame - General recommendations for selection, care and use of protective clothing**.

Protective Gloves

Protective gloves should be selected and maintained by following the information contained in **AS/NZS 2161.1:2000, Occupational protective gloves – Selection, use and maintenance**. Test methods for gloves offering varying types of protection are included in other parts to the **AS/NZS 2161, Occupational Protective Gloves series**.

Medical examination gloves can be tested to:

- **AS/NZS 4011.1:2014, Single-use medical examination gloves - Specification for gloves made from rubber latex or rubber solution**
- **AS/NZS 4011.2:2014, Single-use medical examination gloves - Specification for gloves made from poly(vinyl chloride)**
- **AS/NZS 4179:2014, Single-use sterile rubber surgical gloves – Specification**

Work Footwear

Work footwear can be selected by following the information that is included in **AS/NZS 2210.2:2009, Occupational protective footwear - Test methods**. Other information on footwear can be found in:

- **AS/NZS 2210.5:2009. Occupational protective footwear - Specification for occupational footwear**

- **AS/NZS 2210.3:2009, Occupational protective footwear - Specification for safety footwear**

- **AS/NZS 2210.4:2009, Occupational protective footwear - Specification for protective footwear**

Clothing for Different Types of Industries

Welding

Manufacturing requirements for welding aprons are included in the **EN ISO 11611:2007, Protective Clothing for use in Welding and Allied Processes.**

Fire Fighting

High visibility clothing used by fire fighters should be selected by following the details that are included in **AS/NZS 4602.2:2013, High visibility safety garments – Garments for fire service personnel**.

Manufacturing requirements and test methods for clothing are included in:

- **AS/NZS 4967:2009, Protective clothing for firefighters - Requirements and test methods for protective clothing used for structural firefighting**
- **AS/NZS 4824:2006, Protective clothing for firefighters - Requirements and test methods for protective clothing used for wildland firefighting**
- **AS/NZS 4821:2014, Protective footwear for firefighters - Requirements and test methods**

High Voltage Electrical Work

Information on clothing for electrical work is included in:

- **AS 2225-1994, Insulating gloves for electrical purposes**
- **EN 60984:2014, Live Working – Electrical Insulating Sleeves**
- **IEC 60895 Ed 2.0, Live working - Conductive clothing for use at nominal voltage up to 800 kV a.c. and +/- 600 kV d.c**

Chemical Industries and Laboratories

- **ISO 15027, Transportable wall saw and wire saw equipment for job site series of Standards** for immersion suits

Chainsaw Operators

- **AS/NZS 4453, Protective clothing for users of hand-held chainsaws series of Standards**

Electrical Work

Low Voltage Electrical Work

Safe work practices for electrical equipment

Safe work practices for those working with low voltage electrical equipment are included in **AS/NZS 4836:2011, Safe working on or near low-voltage electrical installations and equipment**.

Safe Work Method Statements

- **S8.2.12.0090, Safe Work Method Statement – Electrical wiring**
- **S8.1.12.0089, Safe Work Method Statement – Electrical Fit-off**
-

Electrical Installations

- **AS/NZS 3000:2007, Electrical installations (known as the Australian/New Zealand Wiring Rules)**
- **AS/NZS 3017:2007, Electrical installations – Verification guidelines**
- **AS/NZS 3019:2007, Electrical installations – Periodic verification**

Selecting and Rating Cables

- **AS/NZS 3008.1.1:2009, Electrical installations – Selection of cables – Cables for alternating voltages up to and including 0.6 1/kv**

Construction and Demolition Sites

- **AS/NZS 3012:2010, Electrical installations – Construction and demolition sites**

Caravans, Caravan Parks and Transportable Structures

- **AS/NZS 3001:2008, Electrical installations – Transportable structures and vehicles including their site supplies**

Shows and Carnivals

- **AS/NZS 3002:2008, Electrical installations – Shows and carnivals**

Cardiac Protected Areas in Healthcare Facilities

- **AS/NZS 3003:2011, Electrical installations – Patient treatment areas**

Marinas and Recreational Boats

- **AS/NZS 3004,1:2008, Electrical installations – Marinas and recreational boats – Marinas**
- **AS/NZS 3004.2:2008. Electrical installations – Marinas and recreational boats – Recreational boat installations**

Testing and Tagging Electrical Equipment

Equipment using cords and plugs not used for medical devices, or on construction sites should foolow the information in:

- **AS/NZS 3760:2010, In-service safety inspection and testing of electrical equipment**
- **AS/NZS 5761:2011, In-service safety inspection and testing – Second-hand equipment prior to sale**
- **AS/NZS 5762:2011, In-service safety inspection and testing – Repaired electrical equipment**

Electro-Medical Equipment should follow information in **AS/NZS 3551:2012, Management programs for medical equipment**

High Voltage Electrical Work

High voltage overhead line design should follow information in:

- **AS/NZS 7000:2010, Overhead line design – Detailed procedures**
- **AS 5804, High-voltage live working Series**
- **AS 5577-2013, Electricity network safety management systems**
- **S812.0328, Safe Work Method Statement – Power Pole – Installation**

The Energy Networks Association (ENA) is the peak national body representing gas distribution and electricity transmission and distribution businesses throughout Australia. They provide a range of guidelines for electrical work:

- **ENA NENS 03-2006, National guidelines for safe access to electrical and mechanical apparatus**
- **ENA NENS 04-2006, National guidelines for safe approach distances to electrical and mechanical apparatus**
- **ENA NENS 05-2006, National fall protection guidelines for the electricity industry**
- **ENA National Guidelines Docs**

Safe Work Lighting

Lighting Levels

Lighting levels for tasks undertaken in different types of environments is included in the **AS/NZS 1680, Interior lighting Series**.

Indoor Lighting

Specific information on recommended indoor lighting (lux) levels for different types of tasks is included in **AS/NZS 1680.1:2006, Interior and workplace lighting – General principles and recommendations** and lighting requirements for stairs and similar types of commonly used access areas are included in **AS/NZS 1680.2.1:2008, Interior and workplace lighting – Specific applications – Circulation spaces and other general areas**.

Outdoor Lighting

Recommended outdoor lighting levels for workplaces can be determined by following the information that is included in **AS/NZS 1680.5:2012, Interior and workplace lighting - Outdoor workplace lighting**.

Recommended floodlighting levels for residential, commercial and industrial areas is included in **AS 4282-1997, Control of the obtrusive effects of outdoor lighting**.

Information on lighting levels for open-top car parks is included in **AS/NZS 1158.3.1:2005, Lighting for roads and public spaces - Pedestrian area (Category P) lighting - Performance and design requirements**. Information on recommended lighting levels for roof-top car parks is included in **AS/NZS 1680.1:2006**.

Outdoor lighting levels for areas where different types of sporting and recreational activities are undertaken are included in the **AS 2560, Sports lighting Series** and **HB 49, Sporting Facilities Manual Series**.

Lighting levels for tunnels can be determined by following the information that is included in **AS/NZS 1158.5:2014, Lighting for roads and public spaces – Tunnels and underpasses**.

Mining Equipment

For general information on mining equipment, refer to **AS/NZS 3007:2013, Electrical equipment in mines and quarries – Surface installations and associated processing equipment** and the **AS/NZS 4871, Electrical equipment for mines and quarries Series**.

Safe Work Method Statements

Safe Work Method Statements for persons working in mines can be prepared by following the information that is included in **S8.1.12.0066, Safe Work Method Statement – Mining – Work Near**.

Plumbing and Gas Installations

The requirements for plumbing and gas are outlined in **AS/NZS 3500, Plumbing and drainage Series**. For those requiring detailed information on gas and plumbing installations refer at **Plumbing and drainage Set**.

AS/NZS 5601.1:2013, Gas installations – General requirements specifies the requirements and means of compliance for the design, installation and commissioning of gas installations that are associated with use or intended use of fuel gases such as natural gas, LP Gas, biogas or manufactured gas. **AS/NZS 5601.2:2013, Gas installations – LP Gas installations in caravans and boats for non-propulsive purposes** sets out mandatory requirements and means of compliance for the design, installation and commissioning of LP Gas installations in caravans and boats for non-propulsive purposes.

Maintenance and testing requirements for thermostatic mixing valves can be determined by following the information that is included in **AS 4032.3-2004, Water supply – Valves for the control of hot water supply temperatures – Requirements for field testing, maintenance or replacement of thermostatic mixing valves, tempering valves and end of line temperature control devices.**

Detailed information on methods that can be used to size eaves and box gutters is included in **HB 114:1998, Guidelines for the design of eaves and box gutters.**

Safe Work Method Statements for plumbing and gas installations are:
- **S8.1.12.0199, Safe Work Method Statement – Plumbing Fit-off (such as tap ware)**
- **S8.1.12.0197, Safe Work Method Statement – Plumbing – Hot & Cold Water Rough In**
- **S8.1.12.0119, Safe Work Method Statement – Gas Installations to Premises**

Welding Safety

In areas where welding is being conducted, fire safety precautions should be in place and information on this can be found in **AS 1674.1-1997, Safety in welding and allied processes – Fire precautions** (Note: A sample copy of a hot work permit is included in this Standard. Please contact the **WTIA** for further information on 'Hot Work Permits').

Electrical hazards should also be identified when working with wedling. This information is included in **AS 1674.2-2007, Safety in welding and allied processes – Electrical**

Safe Work Method Statements

There are a number of welding **Safe Work Method Statements**. Specifically, Oxy-Acetylene wedling can follow **S8.1.12.0296, Safe Work Method Statement - Welding - Oxy-Acetylene** and MIG welding can follow **S8.1.12.0297, Safe Work Method Statement - Welding- MIG**. Fire safety requirements for welders can also be assessed by applying the information contained in **S8.2.13.0136, Safe Work Method Statement – Hot Works**.

Dangerous Goods

Transporting Dangerous Goods by Road and Rail

Those responsible for transporting dangerous goods by road and rail are required to ensure each vehicle has either **HB 76:2010, Initial Emergency Response Guide**, or the relevant **emergency procedure guides** for the types of dangerous goods they are transporting. Emergency procedure guides are not available for all classes of dangerous goods.

Those using emergency procedure guides shall ensure that they have a copy of **AS 1678.0.001-2004, Emergency procedure guide - Transport -- Vehicle fire**.

Storing and Handling Dangerous Goods

Requirements for storing and handling dangerous goods are covered under the following areas:

- Flammable and Combustible Liquids
  AS 1940-2004, The storage and handling of flammable and combustible liquids and
  AS/NZS 5026:2012, The storage and handling of Class 4 dangerous goods

- Combustible Dusts
  AS/NZS 4745:2012, Code of practice for handling combustible dusts

- Agricultural and Veterinary Chemicals
  AS 2507-1998, The storage and handling of agricultural and veterinary chemicals and **AS 2714-2008, The storage and handling of organic peroxides**

- Corrosive Substances
  AS 3780-2008, The storage and handling of corrosive substances

- Oxidizing Substances
  AS 4326-2008, The storage and handling of oxidizing agents

- Mixed Classes of Dangerous Goods
  AS/NZS 3833:2007, The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers

- Toxic and Infectious Substances
  AS/NZS 4452:1997, The storage and handling of toxic substances

Safe Work Method Statements for working with various dangerous goods include:

- **10183. Safe Work Method Statement – Painting – General Safety SWMS**

- **10115, Safe Work Method Statement - Fuel Storage – Petrol & Diesel – Handling - Decanting SWMS**

- **10167, Safe Work Method Statement - Liquid Petroleum Gas - LPG - Working Around SWMS**

- **10123, Safe Work Method Statement - Refrigerant Gas - Safe Use SWMS**

- **10203, Safe Work Method Statement - Pool Chemicals - Storage - Handling SWMS**

- **10188 V3, Safe Work Method Statement - Pest Management – Spraying Pesticide**

- **10265 V3, Safe Work Method Statement - Pest Control – Termite & Ant Eradication**

Gases

Storage and handling requirements for different types of gases are described in the Standards below:

- Flammable, Non-Flammable and Toxic Gases
  AS 4332-2004, The storage and handling of gases in cylinders

- LP Gases
  AS/NZS 1596:2014, The storage and handling of LP gas

- Non-Flammable Cryogenic and Refrigerant Liquids
  AS 1894-1997, The storage and handling of non-flammable cryogenic and refrigerated liquids

- Liquefied Chlorine Gases
  AS/NZS 2927:2001, The storage and handling of liquefied chlorine gas

- Liquefied Natural Gas
  AS 3961-2005, The Storage and handling of liquefied natural gas

- Medical Gas Pipeline Systems
  AS 4289-1995, Oxygen and acetylene gas reticulation systems
- Inert Gases
  AS 5034-2005, Installation and use of inert gases for beverage dispensing

Decanting and Filling Cylinders

Those responsible for decanting and refilling cylinders can follow the information contained in:

- **AS 2030.2-1996, The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases - Cylinders for dissolved acetylene**
- **AS 2030.5-2009, Gas cylinders - Filling, inspection and testing of refillable cylinders**
- **AS 3848, Filling of portable gas cylinders series of Standards**

Asbestos

Levels of asbestos can be determined by following the information that is included in **AS 4964-2004, Method for the qualitative identification of asbestos in bulk samples**.

Safe Work Method Statements

There are number of **Safe Work Method Statements** that may be of interest to those working with asbestos.

Explosives

Those responsible for storing and handling different types of explosives can follow information that is included in the **AS 2187 series of Standards**.

Fuel Tanks

Fuel tank requirements can be found under the following areas:

Installing and Operating Petroleum Storage Systems

- **AS 4897-2008, The design, installation and operation of underground petroleum storage systems**

Removing and Disposing of Storage Tanks

- **AS 4976-2008, The removal and disposal of underground petroleum storage tanks**

Inspecting Tanks

- **AS 4971-2008, Inspection and integrity monitoring of large steel vertical petroleum storage tanks**

Radiation

Standards that can be used to reduce levels of infrared, ionizing, non-ionizing and electromagnetic radiation that may be present in workplaces include:

Infrared Radiation

Those exposed to different types of infrared radiation should be selecting eye protectors by following the information that is included in **AS/NZS 1336:2014, Eye and face protectors – Guidelines**. Eye

protectors providing protection against infrared radiation should be manufactured to the standards listed below:

- **AS/NZS 1337.1:2010, Personal eye protection - Eye and face protectors for occupational applications**
- **AS/NZS 1337.4:2011, Eye and face protection - Filters and eye protectors against laser radiation (laser eye-protectors)**
- **AS/NZS 1337.5:2011, Eye and face protection - Eye protectors for adjustment work on lasers and laser systems (laser adjustment eye-protectors)**

Emission levels for lasers providing protection against infrared radiation are included in **AS/NZS IEC 60825.1:2014, Safety of laser products - Equipment classification** and requirements and **AS/NZS IEC 60825.14:2011, Safety of laser products – A user's guide**.

Ionizing Radiation

Gloves providing protection against ionizing radiation should be selected by following the details that are described in **AS/NZS 2161.1:2000, Occupational protective gloves – Selection, use and maintenance**. The manufacturing standard for these types of gloves is **AS/NZS 2161.8:2002, Occupational protective gloves - Protection against ionizing radiation and radioactive contamination**.

Those working in laboratories where levels of ionizing radiation may be present should follow the recommendations that are included in the Standards below:

- **AS/NZS 2243.1:2005, Safety in laboratories - Planning and operational aspects**
- **AS 2243.4-1998, Safety in laboratories - Ionizing radiations**

Radiotherapy rooms should be designed by following the recommendations that are included in **AS/NZS 3824:1998, Guidelines for radiotherapy treatment rooms design**.

Non-Ionizing Radiation

Persons working in laboratories using equipment that may emit levels on non-ionizing radiation should follow the guidelines that are included in the Standards below:
- **AS/NZS 2243.1:2005, Safety in laboratories – Planning and operational aspects**
- **AS/NZS 2243.5:2004, Safety in laboratories - Non-ionizing radiations - Electromagnetic, sound and ultrasound**

Electromagnetic Radiation

Persons working with or near electronic devices or high voltage power lines may be exposed to high levels of electromagnetic radiation. Levels of electromagnetic radiation can be determined by following the methods outlined in:

- **AS/NZS 2344:1997, Limits of electromagnetic interference from overhead a.c. powerlines and high voltage equipment installations in the frequency range 0.15 to 1000 MHz**

- **AS/NZS 2772.2:2011, Radiofrequency fields - Principles and methods of measurement and computation - 3 kHz to 300 GHz**

Ultraviolet Radiation

Eye protectors can be used to provide protection to persons working in environments where high levels of ultraviolet radiation may be present. These types of protectors can be selected by following the recommendations described in **AS/NZS 1336:1997, Recommended practices for occupational eye protection**. Filters providing ultraviolet radiation protection should be tested to **AS/NZS 1338.2:2012, Filters for eye protectors against ultraviolet radiation**.

Clothing providing UV radiation protection should be tested to **AS/NZS 4399:1996, Sun protective clothing – Evaluation and classification**.

Welders can reduce levels of radiation by using welding curtains. The manufacturing standard for welding curtains is **AS/NZS 3957:2014, Light transmitting screens and curtains for welding operations**.

WHS Standards for Different Types of Industries

Building and Construction Industries

There are a large number of workplace health and safety Standards that may be of interest to those working in building, construction and related industries. A good overview of these Standards is available by clicking **Plant Equipment** and **Working At Heights** section in this guide.

The vast majority of Safe Work Method Statements are prepared for those working in building and construction industries. Please click here **Safe Work Method Statements** to obtain information on these areas.

Demolishing Buildings

Those responsible for demolishing buildings should follow the information that is included in **AS 2601-2001, Demolition of structures**

Safe Work Method Statements

Safe Work Method Statements can be prepared by following the information that is included in the publication 10078, **Safe Work Method Statement – Demolition.**

Roofing
Metal roofers and tilers can review workplace health and safety issues that are included in **HB 39:1997, Installation code for metal roof and wall cladding**.

Safe Work Method Statements

There are number of Safe Work Method Statements for roofers:

- **10011, Safe Work Method Statement - Asbestos Safety – Working in Roofs SWMS**
- **10223, Safe Work Method Statement - Roofing - Tiled SWMS**
- **10224, Safe Work Method Statement - Roofing – Zincalume - Colorbond SWMS**
- **10225, Safe Work Method Statement - Roofs – Working on SWMS**
- **10228 V4, Safe Work Method Statement - Roof - Edge Protection**
- **10262, Safe Work Method Statement - Synthetic Mineral Fibres (SMF) - Working in Roof Space with SWMS**
- **10415, Safe Work Method Statement - Asbestos - Roof Restoration SWMS**

Welding Safety

Detailed information on fire and electrical safety issues that may need to be considered by welders are included in the **AS 1674 series** of Standards. Welding curtains providing protection against using ultraviolet radiation should be manufactured to **AS/NZS 3957:2014, Light transmitting screens and curtains for welding operations**.

Safe Work Method Statements

There are number of Safe Work Method Statements for welding:

- **10051, Safe Work Method Statement - Welding - Cleaning Stainless Steel Welds – Pickling Gel SWMS**

- **10201, Safe Work Method Statement - Polyethylene Pipe Welding (PPW) SWMS**
- **10255 V3, Safe Work Method Statement - Welding – Plastic - Hot Air**
- **10296, Safe Work Method Statement - Welding - Oxy-Acetylene SWMS**
- **10297, Safe Work Method Statement - Welding – Metal Inert Gas (MIG) SWMS**
- **10298, Safe Work Method Statement - Welding - Spot SWMS**
- **10299, Safe Work Method Statement - Welding - Stick SWMS**
- **10300, Safe Work Method Statement - Welding - Tungsten Inert Gas (TIG) SWMS**
- **10354 V2, Safe Work Method Statement - Welding - Trailer SWMS**
- **S8.1.12.0287, Safe Work Method Statement - Stainless Steel Weld Cleaning**

Workers Using Electric and Pneumatic Tools

Hand held electric tools should be tested to the **AS/NZS 60745, Hand-held motor-operated electric tools series**. Detailed information on safety requirements for non-electric hand-held tools is included in the **EN ISO 11148, Hand-held non-electric power tools series** of European standards.

Safe Work Method Statements

There are a variety of Safe Work Methods that may be of interest to those working with different types of tools.

- **10104, Safe Work Method Statement - Power Tools - Explosive SWMS**
- **10127, Safe Work Method Statement - Hand Tools SWMS**
- **10209 V4, Safe Work Method Statement - Power Tools - General Operation**
- **S8.1.12.0320, Safe Work Method Statement - Mining - Replacement of Ground Engaging Tools**
- **S8.3.12.0209, Safe Work Method Statement - Power Tools**

Mining

Electrical equipment used in surface mines should be tested to **AS/NZS 3007:2013, Electrical equipment in mines and quarries - Surface installations and associated processing plant** and the **AS/NZS 4871 series** of Standards. Please see heading **Plant Equipment** in this guide for information on workplace health standards for plant equipment that may be used in mines.

Safe Work Method Statements

Those working in mining and similar types of industries can prepare Safe Work Method Statements by following the information that is included in **S8.1.12.0066, Safe Work Method Statement - Mining - work near**.

Food Safety

The food safety management certification Standard for businesses is **AS ISO 22000-2005, Food safety management systems – Requirements for any organization in the food chain**. SAI Global Assurance Services provides 3rd management **certification** and **training courses** for those requiring audits to this Standard.

Food premises should be constructed and renovated by following the information that is included in **AS 4674-2004, Construction and fit out of food premises**.

Food Template for Victorian Companies

Class 2 retail and food safety businesses can manage different types of risks by following the information that is include in the publication **1405008, Food safety program template for class 2 retail and food service businesses, no. 1, version 3 with supplementary practices and records**. Typical businesses classified as class 2 premises are listed on the **Victorian Department of Health's website**.

Safe Work Method Statement

Safe Work Methods for those operating catering vans can prepared by following the information that is included in the publication **10132, V3, Safe Work Method Statement - Food - Catering Van - Mobile SWMS**.

Laboratories

Workplace health and safety concerns by those working in laboratories can be managed by following the information that is included in the **AS/NZS 2243, Safety in laboratories spelling series**.

Classification and operational requirements for cleanrooms are included in the Standards listed below:

- **AS/NZS ISO 14644.1:2002, Cleanrooms and associated controlled environments - Classification and air cleanliness**
- **AS/ISO 14644.4:2002, Cleanrooms and associated controlled environments - Design, construction and start-up**
- **AS/ISO 14644.5:2006, Cleanrooms and associated controlled environments – Operations**

Occupational Diving

Workplace health and safety issues for occupational divers can be managed by following the information that is included in the **AS/NZS 2299, Occupational diving operations** and the **AS/NZS 2815, Training and certification of occupational divers Series**.

Confined Spaces

Those working in confined spaces should follow the types of safety procedures that are recommended in **AS 2865-2009, Confined spaces**. Another term that may be used to describe these areas is 'oxygen deficient atmosphere.

Respirators used by those working in confined spaces should be selected and maintained by following the details that are included in **AS/NZS 1715:2009, Selection, use and maintenance of respiratory protective equipment**.

Safe Work Method Statements

There a number of **Safe Work Method Statements** on the topic of confined spaces.

Cleanrooms

Detailed information on requirements for different types of cleanrooms are included in the **AS/NZS ISO 14644, Cleanrooms and associated controlled environments Series** of Standards. Operational requirements for cleanrooms are described in **AS/NZS ISO 14644.5:2006, Cleanrooms and associated control environments – Operation**.

SAI Global Management System Auditing Schemes

SAI Global Assurance Services offers a wide range of certification schemes tailored for workplace health and safety management systems. This information is included below. Please contact SAI Global Assurance Services for further information on these schemes.

For more information, please contact
PHONE: 1300 360 314
EMAIL: assurance@saiglobal.com

Management Systems Auditing Schemes

A wide range of certification schemes tailored for management systems of Workplace Health and Safety.

Occupational Health and Safety (OH&S) Management Systems

The management of Occupational Health and Safety (WHS) risks is a minimum requirement in every workplace. An effective WHS Management System can help to establish the framework of compliance with the two fundamental elements of most WHS legislation:

- That employers provide and maintain a working environment that is safe and without risk
- That employees take reasonable care for the health and safety of themselves and others

Audit and certification through SAI Global is available for several well recognised Standards:

- **AS/NZS 4801 Management System Certification Scheme**
- **OHSAS 18001 International Management System Certification Scheme**
- **National Audit Tool**
- **SafetyMap Scheme**
- **InjuryMap Scheme**

SAI Global Product Certification Schemes

SAI Global's laboratory testing and Standards Mark product certification scheme can be used to audit/certify manufacturers of products to specified standards. Our **Standards Mark** scheme covers the areas described below:

- Testing of sample product by independent accredited laboratories
- Verification of test reports
- Audit of the manufacturing site for initial and ongoing compliance

For more information, please contact
PHONE: 1300 360 314
EMAIL: **product**@saiglobal.com

Online Resources

Get anywhere, anytime access to information of which Australian Standards are referenced in which Australian Commonwealth, State and Territory legislation.
www.saiglobal.com/LexConnect

Do you need to be alerted of regulatory updates and how these changes are applicable to your business processes?
http://www.saiglobal.com/Legislation

Do you need online access to the National Construction Code 2011 and all the Australian Standards[®] referenced within it?
www.saiglobal.com/NCC

Do you need online access to the Building Code of Australia and all the Australian Standards® referenced within it?
www.saiglobal.com/BCA

Do you need online access to the Plumbing Code of Australia 2011 and all the Australian Standards[®] referenced within it?
www.saiglobal.com/PCA

Do you need guidance on which Australian Standards® or parts thereof are referred to in legislation?
www.saiglobal.com/Newsletters

Would you like to be notified when Standards relevant to you are updated, amended or newly released?
www.saiglobal.com/SW

Do you need online access to the full text of your own customised selection of Australian Standards® as well as optional access to international Standards?
www.saiglobal.com/Standards

Do you need to stay current on Australian Legislative, Regulatory and Compliance News?
www.saiglobal.com/legislation

Would you like to drive continued organizational success with results-focused training and professional development?
www.saiglobal.com/training

Need help creating safe work processes for your workplace?
www.saiglobal.com/is3-SWMS

Workplace Health and Safety Regulators

National
Safe Work Australia

NSW
Workcover NSW
Mines Safety – NSW Department of Trade & Investment, Resources and Energy

Victoria
Worksafe Victoria
Energy Safe Victoria (ESV)

Western Australia
WorkSafe WA
WorkCover WA
Department of Mines and Petroleum

South Australia
SafeWork SA

Queensland
Workplace Health and Safety Queensland

Tasmania
WorkSafe Tasmania

Australian Capital Territory
WorkSafe ACT

Northern Territory
NT WorkSafe

Customer Service Contacts

Information Services Division

Standards & Technical Information Group

PHONE (within Australia): 131 242 (Press 1)

PHONE (outside Australia): +61 2 8206 6010 (Press 1)

EMAIL: **sales@saiglobal.com**

Assurance Services Division

Product Services Group

PHONE (within Australia): 1300 360 314

PHONE (outside Australia): +61 2 8206 6322

EMAIL: **product@saiglobal.com**

Also Visit: **Product Certification Key Documents**

Audit & Certification

PHONE (within Australia): 1300 360 314

EMAIL: **assurance@saiglobal.com**

Compliance Services Division

PHONE (within Australia): 1300 513 107

PHONE (outside Australia): +61 2 8206 6000

Also visit: **enquiry.asiapac@saiglobal.com**