

## OBJECTIVE

The purpose of these guidelines is to outline the requirements for the inspection, use and maintenance of safety showers and eyewash stations.

## SCOPE

This process applies to all RMIT colleges, portfolios and activities globally.

NOTE – Referenced legislation applies to Australian jurisdictions only. RMIT campuses in other jurisdiction must refer to local applicable legislation, where available.

## WHAT MUST GO RIGHT?

The 'What must go right?' principles applicable to this process are:

- A suitable safety shower/ eyewash unit is available in labs and workshops where there is a risk of chemical splash to whole body and/or face
- Safety shower / eyewash units are periodically inspected and activated to ensure they function as required
- Safety shower / eyewash units are annually tested, inspected and tagged to ensure they function as required
- Safety shower / eyewash units, which do not function as required, are tagged out, reported and fixed as a matter of urgency
- Records of activations, tests and inspections, including failures, are maintained

## PROCEDURE

### 1. Implementation

#### *Background*

When there is a reasonable likelihood of a hazardous or injurious eye, face and/or body exposure, anyone who is at risk is required to utilise approved and appropriate eye, face and body personal protective equipment (PPE). Safety showers and eyewash stations provide on-the-spot decontamination. They are designed to flush away hazardous chemicals that can cause injury from a user's eyes, face or body. As such, they are a form of first aid equipment to be used in the event of an accident (**HR - HSW-PR31 - Workplace First Aid**). However, they are not a substitute for PPE or for safe procedures for handling hazardous materials.

Having emergency equipment installed is not a sufficient means of assuring safety. Those identified as being at risk of injury must be trained in the location of emergency equipment and in its proper use.

Safety showers and eyewash stations must be maintained, including regular scheduled activation and inspection of the equipment, to ensure that it is in working order, and tested and inspected annually for compliance with **AS 4775-2007 Emergency eyewash and shower equipment**.

Most importantly, local areas must develop a response plan to be used if an accident does occur. The focus of the response plan must be to provide assistance to the injured person as quickly as possible.



The first 10 to 15 seconds after exposure to a hazardous substance, especially a corrosive substance, are critical. Delaying treatment, even for a few seconds, may cause serious injury.

## Installation Risk Assessment




The Senior Leader must ensure that a risk assessment is completed prior to the installation of any safety shower and/or emergency eyewash station, within their area of responsibility. The risk assessment must consider:

- the hazards in the area which may require the use of a safety shower and/or emergency eyewash station as part of any first aid treatment
- the type of system(s) required to address the hazards
- the ability to install the selected system(s) as per the manufacturer's requirements and applicable standards
- the ability to undertake periodic inspections and testing of the selected system(s), as per the manufacturer's requirements and applicable standards
- the correct use and safe access of the selected system(s)
- the generation and disposal of waste product associated with the use and/or the inspection and testing of the selected system(s)

The risk assessment must be completed in consultation with key stakeholders as detailed in **HR – HSW-PR07 – Consultation and Communication**. Refer to **HR – HSW-PR09 – HSW Risk Management** for further guidance on risk assessment.

## Types of systems

Safety showers and eyewash stations provide on-the-spot decontamination. They allow users to flush away hazardous chemicals that can cause injury. The types of system found at RMIT are detailed below:

Type of system	Example
<b>Safety showers</b> Safety showers, also known as deluge showers, are designed to flush the user's head and body. They should not be used to flush the user's eyes because the high rate or pressure of water flow could damage the eyes in some instances. Safety showers are provided to wash off hazardous chemicals that may be splashed on the skin. Large volumes of water should be used to wash away contaminants and it may be necessary to remove contaminated clothing. Safety showers can also be used effectively in extinguishing clothing fires or for flushing contaminants off clothing.	
<b>Eyewash and eye/facewash stations</b> Eyewash stations are designed to flush the eyes and face area if hazardous chemicals are splashed into them. In the event of hazardous chemicals splashing in the eyes, the stream of water from the spray should be directed into the eye for a period of 15 minutes before seeking medical attention. A variety of eyewash units exist. Units are divided into installed/plumbed and portable units. Plumbed units must have a 30-psi water supply. Flow is to be provided to both eyes simultaneously and at a velocity low enough to prevent injury to the eyes. Plumbed and self-contained units must perform as follows: <ul style="list-style-type: none"><li>• Eyewash: 1.5 L/pm for 15 minutes</li><li>• Eye/face wash: 11.4 L/pm for 15 minutes</li></ul>	 <p><b>Eyewash unit</b></p>  <p><b>Eyewash / Facewash unit</b></p>

The difference between the eye and eye/face wash is the size of the nozzle and spray pattern. The unit must be installed between 33 inches and 45 inches above ground level and 6 inches away from the wall. There must be enough room to allow the eyelids to be held open with the hands while the eyes are in the flushing water stream.

Since the nozzles face upward to operate properly, dust and other contaminants could fall into the openings clogging them or providing a breeding area. Therefore, the nozzles must be protected in such a way as to not require a separate movement to remove them when the unit is activated.

## Combination units

This name refers to equipment that shares a common plumbing fixture. Any of the fixtures such as shower, eyewash, and eye/face wash or drench hose may be in this combination, but most commonly it refers to a shower and an eyewash station.

A combination unit can flush any part of the body or all the body. It is the most protective device and should be used wherever possible. This unit is also appropriate in work and learning environments where detailed information about the hazards is lacking, or where complex, hazardous activities involve many chemicals with different properties. A combination unit is useful in situations where there are difficulties handling a person who may not be able to follow directions because of intense pain or shock from an injury.



## Drench hoses

Hand-held drench hoses are supplemental devices that are designed to support safety showers and eyewashes but cannot be used instead. They consist of a flexible hose connected to a flushing fluid supply and used to provide fluid to irrigate and flush face and body areas. Drench hoses are useful in cases where the user is in the prone position or to reach areas of the face and body inaccessible to the fixed stream of a deluge shower or eye wash unit. They should provide a flow rate of at least 11.4 L/pm for 15 minutes.



## Eyewash bottles

Personal eyewash equipment can be used to support plumbed or self-contained eyewashes but may not replace them. They are regarded as secondary or supplemental eyewash stations and do not meet the Australian Standard.

They are portable and permit immediate flushing of contaminants or small particles. The main purpose of eyewash bottles is to supply immediate flushing until the injured person can get to a primary eyewash station that provides a full 15-minute flow. These personal eyewash stations should be placed in proximity to a person's area for immediate flushing.

Eyewash bottles can be very difficult for the user to handle, especially when alone and when both eyes have been exposed. (e.g., holding the eyelids open while handling the unit is awkward). Also, one bottle cannot flush both eyes simultaneously. Since the fluid supply lasts for only a short period of time, the bottle may not be able to wash the eyes sufficiently.

NOTE: All personal wash units (eyewash bottles), must be checked monthly by the local area Technical staff for the expiration date



and to determine if it has been used. Dispose of any opened or eyewash bottles that have use by dates that have expired. The expiry date of the fluid should be printed permanently on the unit.

## Training

All staff, students, researchers and third parties who might be exposed to a chemical splash must be trained by the local School / Department as part of their induction on the following:

- The specific location of the units serving that area
- How to properly activate and use the specific type of system
- Use of the eyewash station in the event of an eye injury - Individuals must be instructed to hold the eyelids “open” and roll the eyeballs continuously so fluid will flow on all surfaces of the eye and under the eyelid. Seek medical attention. For specific treatment for the chemical concerned – refer to the SDS.

People may not always be able to flush their eyes on their own because of intense pain. Nearby helpers should be prepared to assist with holding the eyelids open. Other helpers may need to assist with keeping the person under the flushing fluid for at least 15 minutes.



Flushing eyes

- Use of the safety shower in the event of a chemical spill onto their body. Individuals should be instructed to remove all contaminated clothing including footwear and socks/stockings while under the shower when cross contamination has occurred. Have someone assist with clothing removal when possible. An assistant may use a fire blanket or uncontaminated article of clothing as a shield to provide privacy for someone who needs to remove their clothes while under an emergency shower, and for body coverage while seeking medical attention.
- Flush body for a minimum of 15 minutes, seek medical attention. For specific treatment for the chemical concerned – refer to the SDS.

It should never be assumed that people are already aware of the proper procedures. Written instructions must be made available to all staff, students, researchers, third parties and others and posted beside the safety shower and eyewash station. Part of the instructional process should include a “hands-on” drill on how to find equipment.

The wearing of contact lenses can be dangerous because chemicals can become trapped under a contact lens. Any delays caused by removing contact lenses to rinse eyes could result in injury. Training must include instruction in contact lens removal.

## Responsibility and frequency of testing

It is important to understand that routine inspection involving “activation or flushing” and “flow testing” are different procedures that are performed by different people and occur at different intervals.

## Routine inspections

**AS 4775-2007 Emergency eyewash and shower equipment** states that plumbed showers and eyewash equipment “shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available”. This weekly interval may be varied based on a documented risk assessment.

The standard notes that the intent behind this is to ensure that *“there is a flushing fluid supply at the outlet of the device, to clear the supply line of any sediment build-up that could prevent fluid from being delivered to the outlet of the device and to minimize microbial contamination due to sitting water.”*

The frequency of testing practice varies across Australian universities with most conducting their routine inspections either weekly or monthly. For RMIT, a monthly inspection routine is recommended as adequate to ensure that safety showers and eyewash stations supply clean, potable water and are in proper working order. However, Schools / Departments may consider that in situations where they are working / learning with very corrosive chemicals with high splash potential, a weekly or even daily check would be advisable. This is to be determined by the School or Department via the completion of a risk assessment (**HR – HSW-PR09-TM01 – HSW Risk Assessment Template**).

Activation and flushing are to be done by laboratory / workshop Technical Officers.

NOTE: Whatever the frequency of testing, it is essential that a systematic and verifiable testing routine of all safety showers and eyewash stations is in place.

## Flow testing

Annual flow testing and inspections are to be conducted on all safety showers and eyewash stations at RMIT to ensure that they:

- are in proper working condition
- are in compliance with **AS 4775**; and **ANSI Z358.1**

Annual flow testing and inspections shall be conducted by a suitably qualified person organised by Property Services Group (PSG) in consultation with the School or Department to ensure that testing does not interfere with teaching / research tasks in those areas where the safety shower and eyewash stations are located.

## Local routine inspection and activation

### Procedure

Schools / departments must develop, document and implement a specific local inspection and activation procedure. The procedure detailed below may be used if deemed to be sufficient.

- Routine inspections and activation are most effectively conducted by two people.
- Check all associated equipment and fittings for serviceability and ensure clear access to the safety shower/eyewash station.
- If the safety shower is connected to Security via an alarm, contact Security to advise that activation testing is about to commence.
- Depending on the style of test sock, one person will position the test sock under or around the shower head (**Figure 1**) or eyewash station (**Figure 2**). A step ladder may sometimes be necessary to get within reach of the showerhead.
- Place the other end of the test sock inside a bucket (**Figure 3**).
- The second person then operates the safety shower / eyewash station release valve. The valve is designed so that the flushing liquid flow remains on without the use of the operators' hands.
- Equipment must be activated for a period long enough to verify operation and ensure that flushing fluid is available and clean. This flushing helps clean out any rust, scale deposits, or bacteria that may accumulate and cause additional injury.
- After evidence of clear water flow, shut off valve to terminate the activation. Drain the bucket and clean up any water spills that may cause slip hazards.
- Contact Security to advise that activation testing is complete (only required if the unit is alarmed). Confirm with Security that the alarm activated/sounded when the testing commenced.

# Safety Shower & Emergency Eyewash Station Guidelines

HSW-PR31-WI02

RMIT Classification: Trusted

- Re-set any local alarms that have been muted.
- Record the date of the activation and name of person conducting the activation test on the check sheet.

A sample activation record sheet is available in **Appendix A**.



**Figure 1**



**Figure 2**



**Figure 3**

## Equipment required

For internal eyewash/showers (even those equipped with a proper drain), use a bucket to collect drain water and drain in nearby sink.

For flushing of safety shower units, use a shower tester sock and bucket (**Figure 3**). Shower test socks are a vinyl sleeve that fits over the shower head and directs water into a bucket for easy clean-up.

Eyewash stations or safety showers installed in poor drainage areas may deter scheduled flushing. If such a location is unavoidable, a bucket or drum mounted on a dolly or roller, or a wheelie bin (**Figure 4**), may be used to collect water during routine flushing.



**Figure 4**

The person activating the safety showers and eyewashes should turn them to full flow to allow residues and other substances accumulated in the lines to be pushed out and washed away. If the showers and eyewashes are not tested at full flow, they may become so clogged that they are not useful when needed.

## Routine inspection checklist

### Safety showers

The routine inspection should include, at a minimum, the following:

- Ensure that access to the safety shower is clear of any obstructions.

- Ensure the safety shower is within 10 seconds of hazard.
- Visually inspect the safety shower to ensure that there are no broken parts, pipe damage, leakage etc. This should be done prior to activation to avoid further damage to the unit and risk of injury to users and yourself.
- Activate unit. Ensure that the water flow is effective and continuous.
- Operate the safety shower for long enough to verify operation and relieve the unit of any rust and other pipe build-up. Flush the unit until the water runs clear.
- Check that the unit remains activated without the use of the operator's hands. Valve actuator must stay on unless manually turned off and must activate water flow in one second or less.
- Ensure each safety shower has a highly visible emergency sign.
- Ensure that problems identified during the inspection are reported immediately.
- Document the activation with dates and initials on the testing record located either adjacent to the unit or in a central area determined by the School / Department. A sample activation record sheet is available in **Appendix A**.

## Eyewash units

The routine inspection should include, at a minimum, the following:

- Apply testing procedure detailed above
- Verify that protective eyewash covers are properly positioned, clean, intact and operate properly when activated.
- Check that aerators are in good condition and free of corrosion.
- Activate eyewash unit - flush pipes: check that the spouts are clean and that the water flow is effective and continuous. Operate the eyewash for long enough to verify operation and ensure that flushing fluid is available not injurious to the user's eye or face.
- The unit must deliver low-pressure "soft" flow to both eyes so it does not injure the open eyes.
- Controlled flow of flushing fluid must be provided to both eyes simultaneously.
- Ensure each eyewash unit has a highly visible emergency sign.
- Ensure that problems identified during the inspection are reported immediately.
- Document the activation with dates and initials on the testing record located either adjacent to the unit or in a central area determined by the School / Department. A sample activation record sheet is available in **Appendix A**.

## Drench hose units

The routine inspection should include, at a minimum, the following:

- Apply activation procedure detailed above
- Visual inspection of the unit.
- Look for leaks, hose damage, and proper placement of protective covers.
- Ensure each drench hose unit has a highly visible emergency sign.
- Ensure that problems identified during the inspection are reported immediately.
- Document the activation with dates and initials on the testing record located either adjacent to the unit or in a central area determined by the School / Department. A sample activation record sheet is available in **Appendix A**.

## Combination units

Conduct a separate inspection of the emergency shower and the eye/face wash units. Single documentation will apply to the eyewash and shower combination units.

- Apply activation testing procedure detailed above
- Ensure each combination unit has a highly visible emergency sign.
- Ensure that problems identified during the inspection are reported immediately.

- Document the activation with dates and initials on the testing record located either adjacent to the unit or in a central area determined by the School / Department. A sample activation record sheet is available in **Appendix A**.

### Recording inspection results

A check sheet to record that the routine inspection has been undertaken must be located adjacent to the safety shower / eyewash station. An example of a check sheet is found in **Appendix A**.

The School's / Department's Operational Leader is responsible to ensure that the scheduled activation and inspection is conducted and records are maintained adjacent to all units. The School's / Department's Technical Officer is responsible to conduct required periodic activation and inspection and record test results, including any comments.

### Failure

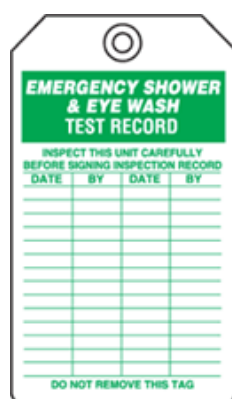
If the safety shower/eyewash station fails to operate, or if defective apparatus is found during the test, action is to be taken to have the problems fixed as a matter of priority. The School's / Department's Technical Officer is responsible tag the shower/eyewash station as "Out of Service" (for further information refer **HR - HSW-PR52 – Lock out & Tag out**) and *immediately* notify the laboratory / workshop manager, Operational Leader and/or supervisor and report to Property Services Group (PSG) who are responsible for organising repairs.

The School's / Department's Operational Leader is responsible to ensure that any failures or issues are addressed as a matter of priority.

The Operational Leader, in consultation with the laboratory / workshop manager or supervisor, must determine whether teaching / research activities may continue in the laboratory / workshop. This may be achieved after completing a risk assessment.

### Annual flow rate testing

Property Services Group (PSG) is responsible for maintaining a schedule of and organising annual testing for all units to ensure compliance to **AS 4775** and **ANSI Z358.1**. At the successful completion of each inspection, the person conducting the testing / inspection must record the date and initial the compliance tag that is permanently attached to each shower or eyewash unit. An example of a compliance tag is shown in **Figure 5**.



**Figure 5**



The person conducting the annual testing / inspection must record and verify that following for each unit conforms to the requirements of the standard. A sample testing checklist (**Appendix B**) may be used to verify conformance to the standard.

## Actuator valves

The actuator valves should be easy to locate and activate, open the valve in one second or less. Once open the valve must stay on without the use of hands until they are intentionally turned off. The safety shower actuator shall not be more than 1733mm above the level on which the user would stand.

## Fittings

Plumbing connection fittings should be:

- Combination shower / eyewash 25mm
- Shower 25mm
- Eye/face wash 20mm
- Eyewash 12mm

## Flushing water

Water must be able to maintain its flush for a minimum of 15 minutes. If there are requirements for longer flushing than this, shall be clearly indicated by prominent signage.

Water should be tepid (between 15° and 35°C). If there is a possibility of water freezing or boiling (over 38°C) adequate protection must be introduced.

Safety showers and eyewash units must meet the minimum flow rate required (see below).

Eyewash units need to be capable of washing both eyes simultaneously at a velocity low enough to be non- injurious to the eyes.

If shut off valves are installed for maintenance purposes, they need to be secure from any unauthorised shut off.

If flushing water accelerates a possible chemical reaction, this should be identified in a risk assessment prior to undertaking the work and further discussions with Property Services Group (PSG).

## Minimum flow rates

All units should be plumbed at 210kPa and must be able to maintain a period of not less than 15 minutes.

- Showers 75.7 litres per minute
- Eye/face wash 11.4 litres per minute
- Drench hose 11.4 litres per minute
- Eyewash 1.5 litres per minute

Rates can be tested with a flow meter or by other means of measuring flushing fluid flow such as timing to fill a bucket.

## Flushing pattern

The spray pattern for the safety shower shall have a minimum diameter of 508mm (20 inches) at 1524mm (60 inches) above the floor surface, and the centre of the spray pattern shall be located at least 406 mm from any obstruction. The flushing fluid shall be substantially dispersed throughout the pattern.

Dimensions for shower equipment are shown in **Figure 6**.

A test gauge for making determination of a suitable eyewash pattern shall be a minimum 102 mm in length with two sets of parallel lines equidistant from the centre (**Figure 7**). The interior set of lines shall be 32 mm apart and the exterior lines shall be 83 mm apart. Place the gauge on top of the stream of the eyewash. The flushing fluid should cover the areas between the interior and exterior lines when the gauge is lowered not more than 38 mm below the fluids peak.

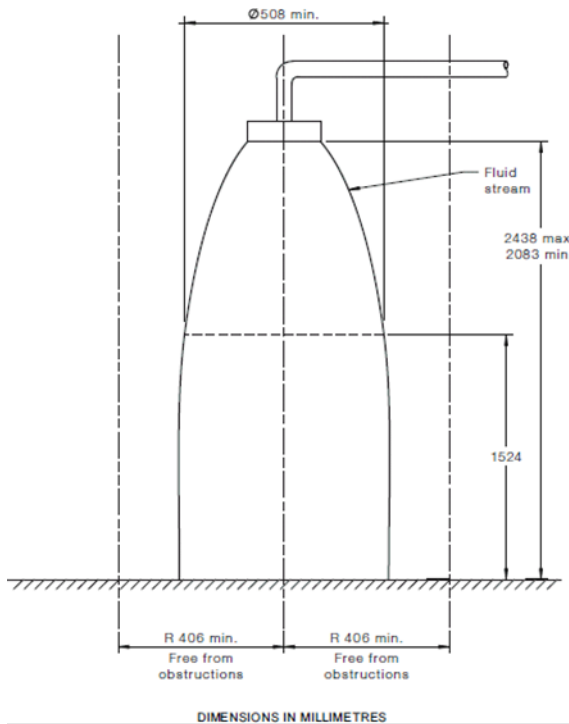


Figure 6 – Shower dimensions

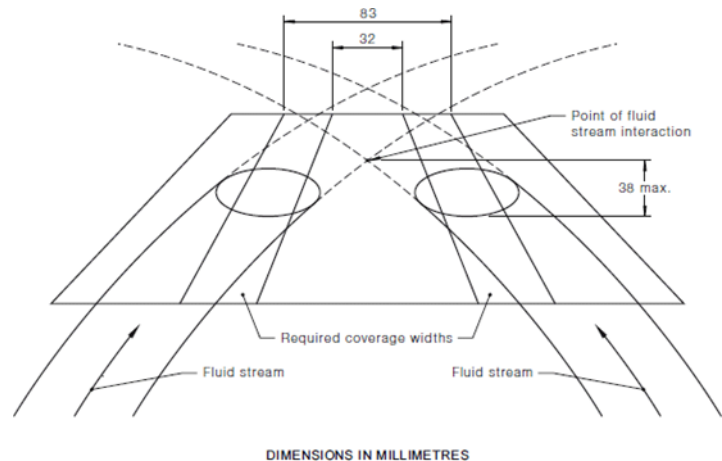


Figure 7 – Eyewash test gauge

## Reporting

The person conducting the annual testing / inspection is responsible for recording the results of the annual test / inspection and providing the results to Property Services Group (PSG).

Property Services Group (PSG) is responsible for providing a copy of the annual testing / inspection record to the Operational Leader of the School / Department where the unit is located.

## Failure

If the safety shower/eyewash station fails to operate, or if defective apparatus is found during the test, or if any of the above elements do not conform to the requirements of the standard, action is to be taken to have the problems fixed as a matter of priority.

The person conducting the annual testing / inspection must tag the shower/eyewash station as “Out of Service” (for further information refer **HR - HSW-PR52 – Lock out & Tag out**) and *immediately* notify the laboratory / workshop manager, Operational Leader and/or supervisor and report to Property Services Group (PSG) who are responsible for organising repairs.

Property Services Group (PSG) is responsible to ensure that any failures or non-conformances are addressed as a matter of priority.

The Operational Leader, in consultation with the laboratory / workshop manager or supervisor, must determine whether teaching / research activities may continue in the laboratory / workshop. This may be achieved after completing a risk assessment.

## Signage

The location of each safety shower or eyewash station shall be well illuminated and be identified with a highly visible sign complying with **AS1319 – 1994 Safety Signs for the Occupational Environment** visible throughout the area served by the equipment. The sign should be in the form of a symbol that does not require people to have language skills to understand it.

Safety shower signage is acceptable for Drench hose units. Emergency eyewash signage is acceptable for eyewash bottle locations.



Figure 8 – Examples of signage

## 2. Responsibilities

### Senior Leaders

- Ensure there are resources available to implement this process in their area of control
- Ensure mechanisms are in place for effective and meaningful consultation regarding matters relating to this process.
- Ensure staff, students, researchers and third parties are provided with necessary information, instruction, supervision, and training relating to this process.
- Review applicable performance indicators to this process on a regular basis

### Operational Leaders

- Ensure resourcing is available within the area of responsibility to ensure the implementation of this process and associated adequate safe systems of work.
- Ensure and participate in effective and meaningful consultation and communication regarding matters relating to this process.
- Ensure that all safety showers and eyewash units within their area of responsibility are routinely inspected and tested as required by this process.
- Ensure that all incidents, near misses, hazards and risks associated with safety showers and emergency eyewash stations are reported, investigated and actioned in accordance to the GSM.
- Maintain records related to safety showers and emergency eyewash stations hazard identification, risk assessment and risk control at relevant points in the safety showers and emergency eyewash stations lifecycle and when training has been conducted
- Ensure staff, students, researchers and third parties are appropriately instructed, inducted and/or trained in the location and use of safety showers and emergency eyewash stations and have access to relevant information
- Monitor compliance with this process and report on outcome
- Maintain a plant register/inspection, testing and monitoring schedule to assist with keeping track of inspection and maintenance schedules for equipment

### Property Services Group (PSG)

- Ensure safety showers and emergency eyewash units function in accordance with **AS4775** and **ANSI Z358.1**

- Develop and implement a schedule of annual flow rate testing and compliance assessment for each emergency unit at RMIT
- Maintain a master list of locations & types of all safety showers and emergency eyewash stations to maintain an accurate inventory of these units
- Organise annual flow rate testing and compliance assessment for each emergency unit at RMIT
- Liaise with Schools / Departments to establish a convenient time for annual testing and inspections and ensure that the person completing the testing and inspection complies with any restrictions that may be in place covering laboratory / workshop operations where the units are located
- Ensure that each unit is appropriately tagged for documentation of location and testing requirements
- Ensure Operational Leaders and laboratory / workshop managers or supervisors are *immediately* advised of any failures during annual testing and inspection
- Organise, as a matter of priority, repairs of any units that failed during annual testing
- Maintain documentation of all annual flow rate testing
- Provide copies of annual test reports to Operational Leaders upon request

### Laboratory / Workshop supervisor

- Ensure safety shower and eyewash units are routinely checked in accordance with these guidelines
- Ensure that the emergency units are clear of obstructions and within 10 seconds of hazards
- Ensure staff, students, researchers and third parties are inducted in the location and use of safety showers and eyewash stations
- If the shower/eyewash station is defective, ensure the unit is tagged “Out of Service” and report to Property Services Group who are responsible for organising repairs
- Ensure activation test records are maintained and accessible for auditing

### Technical staff

- Complete periodic safety shower and eyewash unit activation test and inspections in accordance with these guidelines
- Ensure that the emergency units are clear of obstructions and within 10 seconds of hazards
- Record the results of periodic activation tests and inspection of safety showers and emergency eyewash units
- *Immediately* report failures of safety showers and emergency eyewash units to the respective laboratory / workshop managers or supervisor
- Maintain activation test records

### HSW Team

- Regularly review this process in consultation with relevant stakeholders
- Develop and report on KPIs relevant to this process
- Monitor compliance with this process and report on outcomes

### Staff, Students, Researchers and Third Parties

- Undertake relevant safety shower and eyewash instruction, induction and/or training
- Report hazards or incidents associated with safety showers and eyewash stations
- Follow this process and all reasonable instructions relating to safety shower and eyewash

## 3. Definitions

Defines any key terms and acronyms relating to the process where they apply

Term / acronym	Definition
Combination unit	An interconnected assembly of emergency equipment supplied by a single source of flushing fluid.

Term / acronym	Definition
Drench hose	A supplemental device consisting of a flexible hose connected to a flushing fluid supply and used to provide fluid to irrigate and flush face and body areas.
Emergency shower	A device specifically designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.
Eye/face wash	A device specifically designed and intended to deliver flushing fluid in sufficient volume to irrigate and flush both the face and the eyes simultaneously
Eyewash	A device specifically designed and intended to deliver flushing fluid in sufficient volume to irrigate and flush the eyes
SDS	Safety Data Sheet
Self-contained eyewash	An eyewash device that contains its own flushing fluid and needs to be refilled or replaced after use.
Stay-open valve	A valve that needs to be closed manually by the user.
Tepid	Moderately warm, lukewarm  NOTE: There is not a medically or industry accepted specification for the temperature range of fluids that may be defined as tepid. The term is used to allow the acceptable temperature range for a particular workplace environment to be decided based on factors such as the geographic location of the equipment, the location of the equipment within the facility and the types of hazardous materials to which the person may be exposed. A recommended temperature range for tepid fluids is 15.6°C to 37.8°C.

## 4. Supporting Documents

Lists the supporting and related Processes and Guidance Material, Legislative references, Australian and International Standards etc. that may be useful references for process users

- HR - HSW-PR31 - Workplace First Aid
- HR - HSW-PR52 – Lock out & Tag out
- HR – HSW-PR09-TM01 – HSW Risk Assessment Template
- AS 4775-2007 Emergency eyewash and shower equipment.
- ANSI Z358.1 Emergency eyewash and shower equipment

Appendix A

Sample Test Record Sheet

## Safety Shower & Eyewash Unit Activation Record Sheet



School / Department:

Lab / workshop No.:

Building / Level No.:

Instructions.

Select the system type for activation test and inspection.

Select Pass or Fail for activation test.

Notify Manager/Supervisor if there is a Fail or other issues.

Date	System Type	Comments	Name	Initials
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		
	<input type="checkbox"/> Safety Shower <input type="checkbox"/> Emergency Eyewash <input type="checkbox"/> Combination unit <input type="checkbox"/> Drench hose	Pass <input type="checkbox"/> Fail <input type="checkbox"/>		

## Appendix B

### Annual Testing Minimum Performance Criteria

- Emergency equipment shall be inspected annually to ensure conformance with **AS 4775** (Sect. 6.8)
- Shower must deliver minimum of 75.7 litres per minute of flushing fluid at 210kPa, with the flushing fluid being substantially dispersed throughout the pattern which shall be a minimum diameter of 508 mm when measured at 1524 mm above the surface on which the user stands. (Sect. 6.2, 6.5, 9.1 (b) 9.3)
- Shower operating control valve shall remain open without the use of the operator's hands. The valve shall be simple to operate and go from closed to fully open in one second or less and not be located more than 1733 mm above the level on which the user stands. (Sect.6.3, 7.2, 8.2,9)
- Eye wash equipment shall deliver flushing fluid to both eyes simultaneously flow at rate not less than 1.5 litres per minute at 210kPa. The flushing fluid streams should rise to approximately equal heights and should cover the areas between the interior and exterior lines of the test gauge when lowered not more than 38 mm below the fluids' peak (Sect. 7.1, 9.1(c), 7.3.1)
- Nozzles shall be protected from airborne contaminants. (Sect 7.1)
- Eye/Face wash equipment must deliver flushing fluid to eyes simultaneously at a minimum of 11.4 litres per minute at 210kPa. The flushing fluid streams should rise to approximately equal heights and should cover the areas between the interior and exterior lines of the test gauge when lowered not more than 38 mm below the fluids' peak. (Sect. 8.1, 8.3, 9.1 (d))
- Eye/Face wash valve shall be designed so that the flushing fluid flow remains on without the use of the operator's hands. The valve shall be simple to operate and go from closed to fully open in one second or less. (Sect.7.2 and 8.2)
- Drench hose shall be simple to operate and shall go from closed to fully open in one second or less. The valve shall be corrosion resistant and must deliver a controlled flow of flushing fluid at a velocity low enough to be non-injurious. (Sect. 11.3.1 and 11.3.2)
- Emergency equipment location shall be identified with a highly visible sign complying with AS 1319 (Sect. 6.6, 7.4, 8.4, 9.4 and 11.3.3)
- Deliver tepid flushing fluid. (Sect. 4.19)

*See next page*

# Safety Shower & Emergency Eyewash Station Guidelines



HSW-PR31-WI02

RMIT Classification: Trusted

Annual Testing Minimum Performance Checklist																	
Building & Level No.	Lab/Workshop No.	Safety Shower (SS) or Emergency Eyewash (EE)	Model	RMIT Asset No.	Designated by highly visible signage	Flow of water starts within 1 second	Check Spray Pattern: 1524mm from the surface 50.8 cm diameter	Minimum shower flow rate 75.7 l/m	Minimum eyewash flow rate 1.5 l/m	Minimum eye/face wash flow rate 11.4 l/m	Minimum drench hose flow rate 11.3l/m	Passed eyewash gauge test	Eyewash dust covers are fitted and open automatically on operation	Shower and eye wash control valve shall remain open.	Flushing fluid at tepid temperature	Testing tag is connected to unit and up to date	Comments
Name of person conducting annual test & inspection:												Signature:			Date:		