

TIP sheet

Sun protection

T019 – MARCH 2008



If not appropriately controlled, sun exposure can negatively affect workers health through both the heat and ultraviolet (UV) radiation it generates. Due to the harsh nature of the Australian climate, with Australia having the highest rate of skin cancer in the world, the risks associated with sun exposure are highly prevalent during outdoor work.

Minimum requirements

Managers and Supervisors must identify, register, risk assess and then eliminate or minimise all risks associated with sun exposure to as low as reasonably practicable prior to work being commenced.

SWMSs must be developed and documented for all tasks involving sun exposure based on the results of the completed risk assessment.

Some of the health effects associated with sun exposure include:

- Skin, eye and immune system effects due to UV radiation, such as:
 - Sunburn is a radiation burn that reddens and inflames the skin.
 - Solar keratoses are red, flattish, dry, scaling areas on the skin also referred to as sun spots.
 - Eye damage from acute exposure including photokeratitis (inflammation of the cornea and iris) and photoconjunctivitis (inflammation of the

conjunctiva – commonly known as welders flash).

- Eye damage from chronic exposure including macular degeneration and cataracts.
- Skin cancer, which is the most serious health effect of exposure to UV radiation and includes basal cell carcinoma, squamous cell carcinoma and melanoma (the least common but most dangerous type).
- Heat illness effects due to hot environments, such as:
 - Heat stress including exhaustion, discomfort, fatigue, thirst, confusion and cramps, occurs due to a lack of body fluids.
 - Heat stroke, which is a medical emergency, occurs when the body can no longer control the body temperature.

Risk Assessment

Risk assessments shall be undertaken for all work activities that involve sun exposure and shall consider the following factors:

- For UV radiation:
 - The time of day workers are outside and for how long – UV radiation is most intense in the middle of the day, between 10 am and 2 pm (11 am and 3 pm during daylight saving).

- The time of year outdoor work occurs – UV radiation levels are most intense from September to April.
- Reflective surfaces – UV radiation can bounce off surfaces such as metal roofing, painted walls and concrete, so shade won't block all UV rays.
- The presence or use of photosensitising substances, such as coal tar, some dyes and plants can intensify the effects of UV radiation exposure on the skin or eyes.
- The current levels and availability of shade during work and rest breaks.
- The altitude of the work location – the higher the altitude the greater the intensity of the UV radiation.
- The workers medical history – persons who have a history of sunburn are more susceptible to health effects from sun exposure.
- For heat exposure:
 - The air temperature and movement, humidity of the work area.
 - The radiant temperature of the surroundings.
 - The persons clothing.
 - The duration of the work activity.
 - The physical activity being undertaken by the workers.
 - The number and duration of rest breaks.



- Any other factors adding to the heat of the work area such as plant and materials etc.

Review

Risk Assessments, SWMSs and work procedures must be reviewed and revised when there is evidence that:

- The original risk assessment is no longer valid or is older than 3 years.
- An injury or illness results from the work.
- A change in legislation or guidance material has been made that effects work involving sun exposure.
- A significant change at the place of work, or in the work practices or procedures to which the assessment relates.

Competency Based Training

All personnel required to undertake tasks involving sun exposure must be trained in safe work methods associated with the task. At a minimum the training shall incorporate:

- The induction of all personnel on site in accordance with the OHS management plan.
- The nature of the hazards involved in sun exposure and the means adopted to control the risks.
- The requirements of the SWMS associated with the work.
- PPE use, care, maintenance and storage.

Risk Control

All risks identified and assessed through the risk assessment process are required to be eliminated or minimised to as low as reasonably practical through the introduction of risk control measures.

Risk control measures shall be implemented in accordance with the hierarchy of controls set out within the OHS Regulation 2001.

The following risk control measures shall be undertaken where practicable:

- Utilise the slip (wear appropriate clothing that covers the body), slop (apply SPF 30+ broad spectrum sun screen), slap (wear an appropriate hat), seek (work and rest in the shade where possible), and slide (wear appropriate sun glasses) principles at all times.
- Allow workers to have adequate rest breaks in the shade to allow them to cool down.
- Provide cool drinking water for all workers – a general rule of thumb is for workers to drink half a litre of water each hour when working in hot conditions.

- Schedule outdoor work and heavy physical activity for the cooler periods of the day (i.e. outside the hours of 8.00 am and 4.00 pm).
- Use mechanical aids where appropriate to reduce the amount of physical activity required to be undertaken by the workers.
- Provide laminated or tinted windscreens for truck and vehicle operators and provide air conditioners in all trucks and vehicles to allow the windows to be wound up.

Clothing

Clothing protects the skin from UV radiation by creating a barrier between the skin and the sun. the best protection comes from loose clothing, made of closely woven fabric, which covers most of the body.

When choosing clothing for workers exposed to the sun, employers should look for clothing with a high UV protection factor (UPF) as per AS/NZS4399.

Clothing with a UPF rating of 10 provide only moderate protection for workers where clothing with a UPF rating of 40+ provide an excellent rating.

Sunscreen

Sunscreen should not be used as the sole form of sun protection for workers; however, should be used in conjunction with other measures (e.g. clothing, hats etc.) to provide adequate protection against UV radiation.

The following guidelines should be followed when choosing and applying sunscreen:

- Choose broad spectrum SPF 30+ water resistant sunscreen.
- Choose sunscreen that meets the requirements of AS/NZS 2604.
- Do NOT use sunscreen that is out of date.

- Apply sunscreen at least 20 minutes prior to working outside.
- Apply a generous amount of sunscreen – an adult should apply at least a teaspoon to each arm, leg, front of body and back of body and half a teaspoon to the face and neck.
- Always reapply sunscreen every 2 hours when working outdoors.

Hats

When choosing a sun-protective hat look for a style that:

- Shades the face, neck and ears.
- Is made of close weave material.
- Allows air flow, remains cool and is easy to keep on.

Shade is a very effective form of sun protection. However, as indirect UV radiation can reflect off surfaces it should be used in conjunction with other measures such as protective clothing, hats and sunscreen. Shade should particularly be provided for rest breaks to allow workers to adequately cool themselves.

Sunglasses

To protect the eyes from UV radiation, employers should provide sunglasses that:

- Are close fitting and wrap around / cover as much of the eye area as possible.
- Meet the requirements of AS/NZS 1067 and have an eye protection factor (EPF) of 10.

Personal Protective Equipment (PPE)

Fit-for-purpose PPE as prescribed in the risk assessment and SWMS shall be available and:

- Meet the appropriate Australian Standard where applicable.
- Be appropriate for the person and the task.

- Be used as per the original equipment manufacturer (OEM) directions.
- Be inspected regularly and before each use for wear, damage and 'use-by' dates.

Emergency & First Aid Provisions

Emergency and first aid provisions are to be determined to minimise the effect of incidents arising from sun exposure. Emergency and first aid procedures should be developed that include:

- The provision of first aid facilities, kits and officers to appropriately deal with sun exposure incidents such as heat stroke.
- Contact details for external emergency services and the relevant on site personnel.

References

[OHS Act 2000](#) & [OHS Regulation 2001](#)

[RTA OHS policy 4.0](#) – PPE

[RTA OHS policy 2.10](#) – Working in extreme temperatures

[WorkCover COP](#) – Work in Hot or Cold Environments

AS/NZS 1067:2003 Sunglasses and fashion spectacles

AS/NZS 2604:1998 Sunscreen products – Evaluation and classification

AS/NZS 4399:1996 Sun protective clothing – Evaluation and classification

[Sun Smart](#)