

## AIM OF THIS GUIDE

The aim of this Guide is to provide information to assist managers and employees to manage working in heat in the asphalt and sprayed sealing industry. The Guide should supplement existing company policy and provide some practical advice to minimise the likelihood of heat illness. This guide is applicable to working outside in hot weather or working with hot materials in workshops and laboratories.

## RESPONSIBILITY

Both employers and employees have responsibilities to ensure work is completed in a safe manner. Occupational Health and Safety legislation sets out the duties of employers and employees.

Managers and supervisors have a duty of care for employees and this includes handling the risks of working in heat in the same manner that other hazards are managed. This includes:

- > Identifying hazards, implementing risk controls and arranging training and awareness programs
- > Providing and maintaining a working environment which minimises the likelihood of excessive heat build-up
- > Where applicable, ensuring compliance with any statutory or company requirements
- > Ensuring appropriate/safe clothing is worn/used in the correct manner
- > Providing such information, instruction, supervision and training as is necessary to gain full compliance with company requirement
- > Conducting a risk assessment where there is a possibility of exposure to excessive heat
- > Informing job applicants of possible heat exposure in the position being applied for
- > Including information on prevention and recognition of heat illness during induction of new employees and project specific induction

Employees have a responsibility to take all reasonable care to protect their health and safety at work, and the health of their co-workers. This includes complying with company requirements for protective clothing, preventative measures and implementing any reasonable instruction issued to protect their own health and safety, and the health and safety of others.

### Disclaimer

Although the information contained in this booklet is believed to be fundamentally correct and current at time of printing, the Australian Asphalt Pavement Association does not accept any contractual, tortious or other form of liability for its contents or any consequences arising from its use.



## NO CUTTING CORNERS

### WHAT ARE THE RISKS OF WORKING IN HEAT?

Working in heat can cause Heat Illness in some circumstances. Heat illness can cover a range of medical conditions that may arise when the body is unable to properly cope with working in heat. These conditions include:

- > Skin rashes (Prickly Heat)
- > Heat cramps
- > Fainting in heat (heat syncope)
- > Fatigue/exhaustion
- > Worsening of pre-existing illnesses and conditions
- > Heat stroke – a life-threatening condition that requires immediate first-aid and medical attention

Other health and safety problems caused by hot working conditions can include:

- > Sweaty hands causing a loss of grip while handling objects, controls, etc.
- > Falls and trips occurring due to fainting or fatigue
- > Mental and/or physical fatigue leading to errors and mistakes
- > Not using personal protection equipment (eg. Ear-muffs, safety shoes, overalls, etc.) due to increased discomfort when it is hot
- > 'Cutting corners' during work due to fatigue or discomfort;
- > Heat interacting with other hazards such as chemicals and manual handling;
- > Burns from contact with hot surfaces or substances.

### SIGNS AND SYMPTOMS OF HEAT ILLNESS

include feelings of sickness, nausea, dizziness, weakness, clumsiness, collapse and convulsions. Anyone with these signs or symptoms should

**SEEK IMMEDIATE FIRST-AID AND MEDICAL ATTENTION.**

### ASSESSING THE RISK OF HEAT ILLNESS

As with any other occupational health and safety risk, there are general procedures that need to be followed when assessing the risk of heat illness at work. These include consulting the employees exposed to the heat as well as their health and safety representatives.

## IDENTIFYING HEAT ILLNESS HAZARDS

The following factors may indicate that a risk of heat illness may occur at a workplace or in a particular job or task:

- > High temperatures
- > High humidity
- > Radiant heat (from the sun, asphalt, or equipment such as ovens)
- > The work is physically demanding
- > The employees have little or no control over the work flow
- > Inappropriate clothing

Employees may inadvertently contribute to increased risk of heat illness with the following being concerns:

- > Employees who have not acclimatised to the conditions prevailing at a particular location
- > Poor level of physical fitness
- > Compromised level of physical fitness due to heart/ circulatory/ skin diseases, the effects of certain medications
- > Being dehydrated, or using diuretics eg tea, coffee, caffeine drinks
- > Employees who have a poor personal lifestyle, in particular with respect to diet and sleep/rest

- > Employees who have had less than normal sleep just prior to working in heat
- > Consumption of excess alcohol, particularly the day/ night prior to working in heat

A risk assessment may be needed where there is concern for heat illness occurring at work.

## PREVENTING HEAT ILLNESS

Heat illness can be prevented and managed using administrative and engineering controls. Administrative controls to reduce heat illness and exposure include:

- > Alter the work schedule so heavy work can occur during cooler periods (i.e. start earlier in the day/night work)
- > Ensure workload is shared evenly among employees, arrange for more staff
- > Rotate staff through tasks to reduce time of exposure to heat
- > Provide extra rest breaks in a cool area
- > Provide opportunities for employees to acclimatise to working in heat. This may include new employees or staff relocating to a hot region or environment
- > Providing rest breaks in a shaded, well-ventilated place
- > Ensure employees have free access to cool, drinkable water
- > Wearing lightweight clothing that still provides adequate protection

## ALWAYS PLAN AHEAD

# 6

- > Provide staff with information and training on recognising heat related illness
- > Provide first aid facilities, trained first aid staff, and access to medical help

Engineering controls to reduce heat illness and exposure include:

- > Provide shade for operators of mobile plant
- > Provide shade for staff during rest periods
- > Shield sources of radiated heat (eg. Exhaust, engines)
- > Provide adequate ventilation or mechanical fans and coolers
- > Use mechanical aids to reduce physical exertion
- > Provide personal protective equipment (PPE) such as wide brim hats, sunglasses, sunscreen, long sleeved shirts and trousers
- > Wide brim hats may not be possible in some circumstances, eg. while wearing earmuffs. In these cases, a legionnaire-style cap with a back flap may be a suitable substitute
- > Safety footwear should be properly fitting and capable of providing protection from rapid heat transfer with no breakdown in safety performance function in a hot environment

The industry in general has adopted the principle that all clothing provided will have long sleeves and long trouser legs (overalls are also acceptable). In order to minimise heat discomfort, the garment's weight, colour, visibility, 'breathability' and capacity to absorb fluid should also be considered.

In selecting the most appropriate clothing, consideration needs to be given not only to providing protection against UV skin damage, but also to providing some degree of fire retardance (resistance to heat-induced degradation of fabric).

The best way to minimise the risk of heat illness is to plan ahead with consultation of employees, such as company health and safety committees, to determine when and where appropriate measures are to be implemented. Heat control measures should be implemented before the risk of heat illness is significant.

## HEAT DISCOMFORT

Heat discomfort is the discomfort we feel when it is hot. It is not a medical condition and therefore is not considered a risk to health.

Most concerns that arise from working in heat are due to heat discomfort. Heat discomfort can generally be managed by increasing air movement, providing access to cool water, and wearing lightweight clothing.

## MORE INFORMATION

For more information on safe working in heat refer to the WorkSafe/ WorkCover department in your State or Territory.