

Safety Manual Heat Related Illness Safety Program
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Policy Section No.:26  
Revision No.: 6

**Effective:** 09-05  
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## HEAT RELATED ILLNESS SAFETY PROGRAM

### 1. Purpose:

- 1.1 To provide a safe and healthful working environment and protect Therma employees who are exposed to temperature extremes, radiant heat, humidity, or limited air movement while working from heat related illnesses.

### 2. Policy:

- 2.1 The workplace will be evaluated to determine if Therma employees are at high risk from heat related illnesses during temperature extremes and hot weather while working. If it is determined employees are at risk they will be trained to be aware of the heat related illnesses, and procedures to take if symptoms are present.
- 2.2 This program shall be made available to all employees.
- 2.3 *Therma shall develop and maintain a Heat Illness Prevention Plan. The plan shall, at a minimum, consist of; procedures for the provision of water and access to shade; high heat procedures; emergency response procedures; acclimatization methods; training requirements. The plan shall be available to employees at the worksite, as well as to representatives of Cal/OSHA upon request. The plan will be considered available at the worksite if, it can be displayed for employees on a cell phone or other electronic device upon request.*

### 3. Implementation of Therma Heat Stress Program:

- 3.1 Therma will implement this Heat Stress Program when employees are at risk of heat related illnesses while they are working and are exposed to a combination of environmental risk factors such as temperature extremes, radiant heat, humidity, limited air movement, protective clothing, workload severity and duration.

### 4. Training:

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- 4.1 Training will be provided prior to job assignment.
- 4.2 Employee training: Training in the following topics will be provided to all supervisory and non-supervisory employees:
  - 4.2.1 Environmental and personal risk factors for heat illness.
  - 4.2.2 Procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.
  - 4.2.3 The importance of frequent consumption of water.
  - 4.2.4 The *concept*, importance, and *method* of acclimatization.
  - 4.2.5 The different types of heat illness and the common signs and symptoms or signs of heat illness.
  - 4.2.6 The importance of immediately reporting to the employer or designee symptoms or signs of heat illness.
  - 4.2.7 Procedure for responding to symptoms of possible heat illness, including how emergency services will be provided should they become necessary.
  - 4.2.8 Procedure for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by medical service personnel.
  - 4.2.9 How to provide clear and precise directions to the work site.
  - 4.2.10 *Therma's responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights without retaliation.*
- 4.3 Supervisor training: Prior to assignment to supervision of employees working in the heat, training on the following topics will occur:
  - 4.3.1 The information provided for employee training.
  - 4.3.2 Procedures the supervisor will follow to implement controls as determined by the employer.
  - 4.3.3 Procedures the supervisor will follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.
- 4.4 *Training records shall be maintained for a period of no less than 3 years*

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## 5. Controls for reducing heat exposure:

- 5.1 Therma's supervisors will evaluate the potential for heat stress. If environmental conditions are present the supervisor will implement controls, such as; work/rest regimen, starting jobs earlier and ending earlier to avoid hot times of the day, and/or, provisions for gaining access to shade.
- 5.2 Acclimatization: Acclimatization means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat. In fully acclimatized individuals, sweating starts faster and the sweat carries less salt and other minerals out of the body. As a result, by sweating more efficiently the body cools down faster. Also there is less demand on the heart and cardiovascular system. For the reasons given above, *being fully acclimatized can allow workers to continue working in warm or hot conditions and decreases the risk of heat illness and unsafe acts.*

In general, physically fit individuals become acclimatized about 50% faster than those individuals who are not physically fit. Overweight individuals may retain more body heat and therefore may be more prone to developing heat illness.

- 5.2.1 Methods to acclimatize employees who are working in hot environments:
- If they are not accustomed to working in warm or hot environments, they should start work slowly and pick up the pace gradually.
  - Assign employees to less physically demanding tasks during their first 14 days of working in a warm or hot environment.
  - Schedule and provide frequent breaks. Supply sufficient amounts of drinking water
  - *Any employee who has been newly assigned to a hot environment shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment*

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## 6. Provisions for water:

- 6.1 An adequate supply of *fresh, pure, and clean, and suitably cool* potable drinking water *shall be located as close as practicable to the areas where employees are working* and will be supplied to employees per safety standards. Employees will be notified of the location of potable water and encouraged to drink. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift.

## 7. Access to Shade:

- 7.1 The company shall provide access to shade when the temperature reaches 80 degrees or upon request by employee when temperature is below 80 degrees. Shade can be in the form of “pop-ups”, umbrellas, or tree-covered areas. *Employees shall be allowed and encouraged to take a preventative cool down rest in the shade whenever they feel the need to do so to protect them from overheating.*
- 7.2 *An individual employee who takes a preventative cool-down rest (A) shall be monitored and asked if he or she is experiencing symptoms of heat illness; (B) shall be encouraged to remain in the shade; and (C) shall not be ordered back to work until any signs or symptoms of heat illness have abated. If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest, the employer shall provide appropriate first aid or emergency response.*
- 7.3 Access shall be permitted at all times.
- 7.4 Locate the shade structure as close as practicable to the areas where employees are working.
- 7.5 “Rule of Thumbs”: The amount of shade present should be at least enough to accommodate *the number of employees on recovery or rest periods. The amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.*

## 8. High Heat Procedures:

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8.1 In the event temperatures *equal or* exceed 95 degrees Fahrenheit, the following procedures shall be implemented:

- Ensure communication methods are available so employees can contact their supervisors when necessary.
- Supervisors shall observe employees for alertness and sign / symptoms of heat illness *by implementing one or more of the following:*
  - *Supervisor or designee observation of 20 or fewer employees, or*
  - *Mandatory buddy system, or*
  - *Regular communication with sole employee such as by radio or cellular phone, or*
  - *Other effective means of observation.*
- *Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.*
- *Designating one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.*
- Reminding employees throughout the work shift to drink plenty of water.

## 9. **First Aid awareness and actions in the event of a heat related illness:**

9.1 Procedures for contacting emergency responders for heat illness emergencies shall be established in the Site Medical Plan. This plan shall be posted and clearly communicated to employees prior to the start of work.

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9.2 Remote Locations: The beginning of each day the supervisor shall evaluate his/her work site to determine if transportation from a remote location to a location where they could be reached by an emergency medical responder if an emergency occurs. These procedures shall be included in the Site Medical Plan.

9.3 The following chart helps employees recognize the main type of heat related illnesses, symptoms, and the appropriate treatment to reduce the effects of the heat related illness.

	Symptoms	Treatment
Heat Cramps	<ul style="list-style-type: none"> <li>muscle spasms in legs or abdomen</li> </ul>	<ul style="list-style-type: none"> <li>move person to a cooler location</li> <li>stretch muscles for cramps</li> <li>give cool water or electrolyte-containing fluid to drink</li> </ul>
Heat exhaustion	<ul style="list-style-type: none"> <li>headaches</li> <li>clumsiness</li> <li>dizziness/fainting</li> <li>weakness/exhaustion</li> <li>heavy sweating/clammy skin</li> <li>confusion</li> <li>rapid breathing</li> <li>rapid/weak pulse</li> <li>seizures</li> </ul>	<ul style="list-style-type: none"> <li>move person to a cooler location (do not leave alone)</li> <li>loosen and remove heavy clothing that restricts evaporative cooling</li> <li>if conscious, provide small amounts of cool water to drink</li> <li>fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling</li> <li>call 911 if not feeling better within a few minutes</li> </ul>
Heat stroke	<ul style="list-style-type: none"> <li>sweating may or may not be present</li> <li>red/flushed, hot dry skin</li> <li>bizarre behavior</li> <li>mental confusion or loss</li> </ul>	<ul style="list-style-type: none"> <li>call 911</li> <li>move person to a cooler location (do not leave alone)</li> <li>loosen and remove</li> </ul>

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	of consciousness <ul style="list-style-type: none"> <li>• panting/rapid breathing</li> <li>• rapid/weak pulse</li> <li>• seizures</li> </ul>	heavy clothing that restricts evaporative cooling <ul style="list-style-type: none"> <li>• cool worker rapidly</li> <li>• fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling</li> </ul>
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## 10. Definitions

- 10.1 “Heat Related Illness” – means a serious medical condition resulting for the body’s inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope (fainting) and heat stroke.
- 10.2 “Environmental risk factors for heat illness” – means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees. These conditions will be considered when determining that Therma is implementing controls and methods to reduce the potential for heat related illness.
- 10.3 “Personal risk factors for heat illness” – means factors such as individual’s age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body’s water retention or other physiological responses to heat.
- 10.4 “Shade” – *means blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or*

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*artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.*

- 10.5 *“Heat wave” - Any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days*

*Note: Italicized text added to comply with the HIP Regulation Amendments, March 23, 2015*