

# HEAT STRESS 101

## AWARENESS

Heat stress, heat illness, fatigue and exhaustion are realities that take a toll on the body and the workplace. And it's important to know that they're caused by not being properly hydrated. Dehydration results in poor judgment, mental errors, slower reflexes, taking shortcuts and, in some instances, injury or death.

To be safe and effective on the job, make hydration a number one priority.

## HEAT STRESS

Heat makes you lose more fluids regardless of work conditions. The loss of fluids increases when you factor in PPE, machinery and equipment. Because of these factors, there is great potential for dehydration, heat stress and heat illness. To ensure safety, all work environments should consider all variables like PPE and heat released from machinery and equipment in conjunction with the outside temperature.

## HEAT INDEX

Dangers posed by heat stress

90°-100° F	101°-129° F	130° F +
Possible sunstroke, heat cramps and heat exhaustion with prolonged exposure and physical activity.	Probable sunstroke, heat cramps and heat exhaustion. Possible heat stroke with prolonged exposure and physical activity.	Imminent heat stroke or sunstroke.

## RECOMMENDATION FOR PROPER HYDRATION: WATER (cups per day)



Understanding how worker performance and efficiency is affected by environmental conditions is critical to reducing dehydration related illnesses and accidents.

## HEAT ILLNESS

Heat cramps, heat exhaustion and heat stroke are three common heat illnesses caused by dehydration. It's important to know what they are and how to respond to them.

### HEAT CRAMPS

**Diagnosis** Fatigue, confusion, painful muscle spasms in the arms, legs or abdominal areas.

**Response** Stop exertion, move to a cooler place and drink plenty of fluids with electrolytes.

### HEAT EXHAUSTION

**Diagnosis** Fatigue, confusion, clammy skin, nausea, low blood pressure, rapid pulse, fainting.

**Response** Stop exertion, move to a cooler place and drink plenty of fluids with electrolytes.

### HEAT STROKE

**Diagnosis** Fatigue, confusion, collapse, unconsciousness.

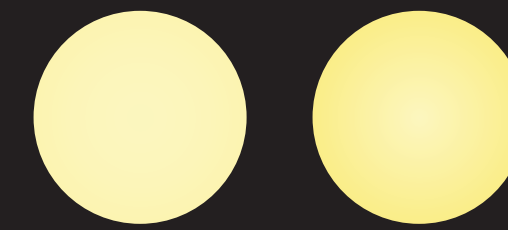
**Response** Seek medical attention immediately and cool the body down as quickly as possible. Move victim to cooler area and reduce body temperature with cold bath or sponging. Use fans and air conditioners. Temperature of 104° F or higher can be fatal. **DO NOT GIVE FLUIDS!**

## HYDRATION LEVEL CHART

Use the color chart to identify hydration level

### TARGET LEVEL

Maintain Level.



### PROPERLY HYDRATED

If urine resembles or matches these colors.

### DEHYDRATED

Needs Improvement.



### DEHYDRATED

If urine resembles or matches these colors more fluids should be consumed.

### SEVERELY DEHYDRATED

Immediate Attention.



### SEVERELY DEHYDRATED

If urine matches these colors, **SERIOUS DEHYDRATION** has occurred. Contact a physician.

## HEAT FACTORS

Contributing to elevated body temperature and rapid fluid loss:

- High temperature and humidity
- Level of exertion/work load or strain
- PPE and heavy clothing
- Poor air flow and circulation
- Machine/equipment heat
- Direct sunlight exposure
- Medical precondition
- Lack of physical conditioning

## ELECTROLYTES



- 6-10 oz. every 15-20 minutes during strenuous activity, especially in hot environments.
- Be sure to include water with electrolyte consumption.
- Water alone will not replace lost nutrients and minerals.
- Electrolytes consist of minerals such as sodium, potassium, magnesium and calcium, which are critical for cell and muscular function.

# 15 MINUTE COOL DOWN

Rotate out employees for **15 minute breaks** during the hottest part of the day to allow for cool down and re-hydration.



## HYDRATION STATION

On super hot days, set up an area where employees can enjoy cool treats such as popsicles, water and electrolyte drinks.



Merchants Metals®

*the first name in fence solutions*