

Document Health and Safety Policy	Published <7/5/2023>	Valid for Billerud North America
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## Document: Elevated Temperatures and Prevention Policy (BNA)

### Purpose

Elevated temperatures are common in our everyday work environment whether it be indoors or outdoors. Recognizing work conditions in which elevated temperatures are or may be present and having a plan is essential. A plan will help avoid heat related injuries or illnesses when dealing with elevated temperatures and strenuous work environments. This policy will be used to guide team members when planning and addressing work taking place in elevated temperatures.

### Definitions

**Acclimatization** - Heat acclimatization is the improvement in heat tolerance that comes from gradually increasing the intensity or duration of work performed in a hot setting. The best way to acclimatize yourself to the heat is to increase the workload performed in a hot setting gradually over a period of 1–2 weeks.

**Cooling devices** - items that can be used, worn or consumed to reduce the temperature and/or humidity in a work environment or reduce workers' chance of suffering from heat illness. Examples include but are not limited to:

- Wearing ice vests, cooling neck wraps, bandanas, moisture-wicking clothing, etc.
- Consumption of cool, potable water (portable water stations, bottled water, large water coolers, etc.)
- Air conditioning
- Consumption of electrolyte-enhanced or replacement products (Squincher, PowerAid, Gatorade, etc.)
- Providing shade from the sun (pop-up or portable tents, umbrella shelters, hard hat neck shades, etc.)
- Use of large industrial air handling systems, fans or air-cooling units
- Implement time-based work schedules, worker rotation schedules, and/or increased break schedules

**Heat Index** - The apparent temperature, is what the temperature feels like to the human body when relative humidity is combined with the air temperature. This has important considerations for the human body's health and the safety of team members. The heat index is classified into four categories:

- Caution (80°F – 90°F HI)
- Extreme Caution (91°F – 103°F HI)
- Danger (103°F – 124°F HI)
- Extreme Danger (126°F or higher HI)

**Heat Source** – anything that can cause or contribute to elevated temperatures in a work area or increase a body's heat burden. These sources could be external (weather-related or located outside the immediate work area), internal (located inside the immediate work area), temporary, seasonal, or intermittent. Examples include but are not limited to:

- Radiant heat from or created by equipment

- Heat elevating from below or exhaust ventilation
- Body heat created by clothing or personal protective equipment worn
- Lack of air movement or flow
- Weather conditions (sunlight, humidity levels, lack of wind, temperature, etc.)
- Physical conditions or requirements of the job or task

## **Extent**

The Elevated Temperature and Prevention Policy applies to all Billerud NA team members, contractors, vendors, and visitors while working on Billerud property or performing offsite work for Billerud.

## **Responsibility**

It is the joint responsibility of all Billerud team members, contractors, vendors, and visitors to comply with and execute the provisions of the Elevated Temperatures and Prevention Policy. All team members shall proactively review their daily work and take action to prevent heat related illness when working in elevated temperatures.

## **Execution**

### **Procedures for Team Member and Supervisor Training**

To be effective, team members must understand this policy and be trained on it. Anyone in a leadership role will be trained in this policy before being assigned to supervise team members.

- New hires will be trained in the policy prior to starting work.

### **Evaluation**

When conditions are present for work in elevated temperatures of 80 degrees or higher, one or more of the following tools shall be utilized.

- Utilization of one or more cooling devices.
- Safety huddle to discuss the work conditions, the work being performed and ways to mitigate risk (including exposure to extreme temperatures and/or heat sources present). Discussion should include the time frame the job/task is expected to take, scheduled breaks, the physical demands of the job and how work can be evenly distributed.
- Evaluation of the ambient temperature and heat index in the work area.

### **Monitoring the Heat Index**

When the Heat Index is 80°F or higher, serious occupational heat-related illnesses and injuries become more frequent, especially in workplaces where unacclimatized team members are performing strenuous work (e.g., intense arm and back/lifting work, carrying, shoveling, manual sawing, pushing, and pulling heavy loads). In these situations, easy access to and utilization of cooling devices is important, especially when working near heat sources. When the heat index exceeds 90 degrees, additional preventive measures shall be implemented (refer to High Heat Procedures section of this policy).

Whenever possible, critical weather information will be taken into consideration to determine when it will be necessary to make modifications to the work schedule (e.g., stopping work early, rescheduling the job,

working at night or during the cooler hours of the day, increasing the number of water and rest breaks, and the use of cooling devices).

Area supervisors, team leaders, shift supervisors, and team members should utilize the following tools to provide heat index levels:

- Weather forecasts can be checked with the aid of the OSHA – NIOSH Heat Safety Tool (<https://www.osha.gov/heat/heat-app>) or by visiting the National Weather Service (<http://www.nws.noaa.gov/>).
- A thermometer can be utilized at the job site to monitor for a sudden increase in temperature.
- Kestrel Pocket Weather Station 3000HS (Heat Stress Meter)
- National Weather Service Heat Index Pocket Guide

### **Procedures for the Provision of Water**

The hydration of all team members is an important part of preventing heat-related illness when dealing with elevated temperatures coupled with a strenuous work environment. The following procedures will be utilized to provide adequate hydration at Billerud NA sites:

- Potable drinking water will be available on site (a minimum of 64 ounces per person) at the start of the shift. All team members will have access to drinking water regardless of crew size or job site specifics.
- A method of drinking the water will be provided including mediums such as an individual thermos, paper cups or cones and will be kept clean until used. Water bottles are also an acceptable practice if needed.
- Water containers will be located as close as practicable to the areas where team members are working (depending on the working conditions and layout of the worksite) to encourage the frequent drinking of water. If worksite factors prevent the water from being placed within a reasonable distance from the team members, bottled water or personal water containers will be made available so that team members can have drinking water readily accessible near their workstation.
- All water containers will be kept in a sanitary condition. Water from non-approved or non-tested water sources (e.g., untested wells) is not acceptable. If hoses or connections are used, they must be approved for potable drinking water systems, as shown on the manufacturer's label.
- All team members shall be aware of the location of the nearest potable water access point regardless of temperature, work or environment where the work is being performed.
- When the heat index equals or exceeds 80 degrees Fahrenheit Billerud NA will provide additional cooling devices.

### **Procedures for Access to Cooling Locations or Shade**

Adequate shade or cooling locations from the direct sunlight is important to the health and safety of team members when protecting against heat-related illnesses. It is important to note that shade is not adequate when the level of heat in the shaded area does not allow the team member to cool down. The following procedures will be utilized to provide adequate shade at Billerud NA sites:

- Cooling locations or shade structures will be opened and placed as close as practicable to the team members when the heat index equals or exceeds 80 degrees Fahrenheit. When the heat index is below 80 degrees Fahrenheit, access to a cool down location will be provided as needed. Note: The interior of

a vehicle may not be used to provide cooling locations or shade unless the vehicle is air-conditioned, and the air conditioner is on.

- Enough cooling locations or shade structures will be available at the site to accommodate all the team members who are on a break or rest period at any point in time. During break periods, there will be enough cooling locations or shade for all team members who choose to remain in the general area of work or in areas designated for recovery and rest periods (employers may rotate team members in and out of break periods, as with recovery and rest periods.)
- Team members will be informed of the location of the cooling locations or shade structures and will be encouraged to take a five-minute cool-down rest as needed. A team member who takes a preventative cool-down rest break will be self-monitoring for or asked if they are experiencing symptoms of heat illness. In no case will the team member be expected to return to work until signs or symptoms of heat illness have abated or medical attention has been given as required for any injury or illness.
- As outdoor crews move, shade structures will be relocated to be placed as close as practicable to the team members so that access to shade is always provided. All team members on a recovery or rest break or a meal period will have full access to shade so they can sit in a normal posture without having to be in physical contact with each other.

### **High Heat Procedures**

When the Heat Index reaches 90 degrees Fahrenheit or higher, high heat procedures shall be implemented to provide additional preventative measures:

- Effective communication by voice, direct observation, buddy system, or electronic means will be maintained so that team members at the worksite can contact a supervisor or call for help, when necessary.
- Frequent communication will be maintained with team members working by themselves or in smaller groups (via phone or two-way radio), to be on the lookout for symptoms of heat illness. The team member(s) will be contacted regularly and as frequently as possible throughout the day since a team member in distress may not be able to summon help on their own.
- Utilization of several cooling devices.
- Pre-shift meetings or pre-job huddles will be held (in areas that don't normally experience these conditions or people who aren't acclimated) before the commencement of work to review work conditions, the high heat procedures, the use of cooling devices, and the ability to reduce or eliminate heat sources in the work area.

### **Procedures of Acclimatization**

Acclimatization is the temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. The body can need time to adapt when temperatures rise due to factors such as a new job assignment or being a new hire introduced into the mill operating environment for the first time.

When team members are new to the job (new hires for example) or job assignment (transferred from another department) and heat index temperatures are different from their previous work environment, the following steps should be taken for acclimatization:

- New team members shall be closely observed (by supervision or designee, trainer, coworker, teammate or other) for the first 14 calendar days. During this time, the team member could have a reduced workload, conduct less physical activity, etc. if needed during elevated temperature conditions.
- A “buddy system” should be used when training activities are taking place in elevated temperatures.
- New team members will be trained in the importance of acclimatization and how to prevent heat related illness.

### **Procedures for Emergency Response**

All team members should utilize their facility’s emergency response plans and procedures when dealing with a heat-related illness when signs or symptoms present themselves.

Below is a summary of the types of heat-related illnesses that can develop if necessary precautions are not taken. Each of these conditions/illnesses can be prevented by acclimatization, utilization of cooling devices, drinking plenty of water before, during and after being in the heat, taking breaks from the heat to cool down and stop sweating, refraining from consuming caffeine and sugary beverages before, during and after being in the heat, wearing lightweight clothing (not tight to your skin), and protecting yourself from sunburns and heat sources.

**Heat Rash** – Irritation of the skin caused by excessive sweating during hot, humid weather.

- **Symptoms** – Red clusters of pimples or small blisters that usually appear on the neck, upper chest, groin, under the breasts, and in elbow creases. Also, heat rash can appear in areas where clothing is restrictive.
- **Treatment** – Drink plenty of water and work in a cooler, less humid environment when possible. Also, keep the rash area dry and apply powder to increase comfort. Do not use ointments and creams for the rash.

**Heat Cramps** – The mildest form of heat injury will consist of painful muscle cramps and spasms that occur during or after intense exercise and sweating in high heat. Heat cramps usually affect team members who sweat a lot during strenuous activity. This sweating depletes the body’s salt and moisture levels. Low salt levels in muscles cause painful cramps.

- **Symptoms** – Muscle cramps, pain, or spasms in the abdomen, arms, or legs.
- **Treatment** – Drink water and have a snack or a drink that replaces carbohydrates and electrolytes (such as sports drinks) every 15 to 20 minutes. If the team member has heart problems, on a low sodium diet and/or cramps that do not subside within 1 hour get medical help.

**Heat Syncope** – Fainting (syncope) episode or dizziness that usually occurs when standing for too long or suddenly standing up after sitting or lying. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

- **Symptoms** – Act of fainting (short duration) and/or dizziness which may occur with light-headedness from standing too long or suddenly rising from a sitting or lying position.
- **Treatment** – Sit or lie down in a cool place and slowly drink water, clear juice, or a sports drink.

**Heat Exhaustion** – The body's response to an excessive loss of water and salt, usually through excessive sweating. Heat exhaustion is most likely to affect the elderly, people with high blood pressure, and those working in a hot environment.

- **Symptoms** – Headache, nausea, dizziness, weakness, irritability, thirst, heavy sweating, elevated body temperature and decreased urine output.
- **Treatment** – Seek medical attention and have someone stay with the team member until help arrives. Remove the team member from the hot environment, consume liquids, and remove all unnecessary clothing including shoes and socks. Utilize cold compresses and/or apply cold water to their head, face, and neck. Encourage frequent sips of cool water.

**Heat Stroke** – Heat stroke is the most serious heat-related illness. It occurs when the body can no longer control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause permanent disability or death if the person does not receive emergency treatment.

- **Symptoms** – Confusion, altered mental status and/or slurred speech. Symptoms can also include loss of consciousness, hot, dry skin, or profuse sweating. Seizures can also occur with extremely high body temperature and can be fatal if treatment is delayed.
- **Treatment** – Seek immediate medical attention and have someone stay with the team member until help arrives. Move the team member to a shaded, cool area and remove outer clothing. Cool the team member quickly using cold water or ice bath if possible, wet their skin and/or place cold wet cloths on their skin. Circulate the air around the team member to speed cooling while placing cold wet cloths or ice on the head, neck, armpits, and groin. Fluids should also be consumed as quickly as possible.

## Appendix A – Heat Index Chart

