

2020 Rev1.1

Heat Stress Management Plan Standard

Huracan Pty Ltd

Document Control: Public

Huracan Pty Ltd
12-Mar-2020
Revision 1.1



Heat Stress Management Plan Revision

Rev	Author	Reviewer	Date	Revision Comments
1.0	K. Hollingworth	J. Hollingworth	9-Aug-2016	First Edition of Document
1.1	K. Hollingworth	J. Hollingworth	15-Mar-2018	Revise document, add flow chart and Appendix A&B
1.1	K. Hollingworth	J. Hollingworth	12-Mar-2020	Revise document

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 1 of 11

TABLE OF CONTENTS

1	Document Control	3
1.1	Review and Update Procedures.....	3
1.2	Distribution.....	3
1.3	Document Updates.....	3
1.4	Document Publication and Display.....	3
1.5	Display Locations	3
2	Overview	3
2.1	Huracan General Code of Behaviour.....	4
2.2	Terminology.....	4
3	Statement of Standard.....	4
4	Objective	4
5	Scope	4
6	Responsibility	4
6.1	Managers.....	4
6.2	Employees.....	5
6.3	Contractors	5
7	Heat Stress.....	5
7.1	Heat Stress Symptoms.....	5
7.1.1	Level 1: Heat Cramps.....	5
7.1.2	Level 2: Heat Stress / Exhaustion	6
7.1.3	Level 3: Heat Stroke	6
7.1.4	Heat Stress Flow Chart	7
8	Heat Stress Prevention	8
Appendix A	Steadman Apparent Temperature Graph	9
Appendix B	Work / Rest Cycle Guide for Working in Hot Conditions	10

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 2 of 11

1 DOCUMENT CONTROL

1.1 REVIEW AND UPDATE PROCEDURES

This document is a 'live' document that shall be reviewed and updated as per the Huracan Document Control and Revision Standard.

It is also to be reviewed immediately after any of the following occur;

- Major operational incident (i.e. increased apparent risk)
- Significant operational, procedural, work practice or technology change
- New or amended safety codes, safety requirements or standards are issued.
- When required by relevant State and Federal Government legislation.

Huracan Management is responsible for the review and revision of this document. The updated document is to carry a new revision date, and are circulated once the revision has been approved, by the following levels of Management:

- Operations Manager – Huracan.
- HSE Manager – Huracan.

1.2 DISTRIBUTION

Requested changes to the Distribution List are to be addressed to Huracan Management.

1.3 DOCUMENT UPDATES

Only registered copies of the document shall be updated. This document becomes uncontrolled when printed.

1.4 DOCUMENT PUBLICATION AND DISPLAY

This document shall be displayed at all times and shall be open for inspection by anyone to whom the plan or part of the plan may affect or apply to.

1.5 DISPLAY LOCATIONS

This document shall be available for display at the following locations;

- Huracan Office
- Huracan Internal Website

2 OVERVIEW

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 3 of 11

2.1 HURACAN GERNERAL CODE OF BEHAVIOUR

Huracan Management requires full compliance with the Standard. Infringement of the standards contained in this document shall be regarded as a serious breach of the Huracan code of behaviour and shall result in disciplinary action, which may include counselling or dismissal. Failing to follow safety instructions, deliberately interfering with safety equipment and systems, deliberate damage to equipment, stealing, vandalism, fighting, practical jokes and horseplay shall not be tolerated and are considered to be serious breached of the Huracan Code of Behaviour.

2.2 TERMINOLOGY

Term	Definition
Fitness for work	A worker is in a state (physically, mentally and /or emotionally) enables them to perform their assigned tasks competently and in a manner which does not compromise or threaten the health and safety of themselves or others.
On Duty	A worker is on-duty any time they are undertaking the duties and responsibilities associated with their contract of employment / job.
Heat Induced Illness	Your bodies inability to cope with excessive heat both influenced by both internal and external factors
Contraband	Illicit substances including drugs, alcohol and prohibited items such as firearms and weapons
ALARP	As Low As Resonably Practicable

3 STATEMENT OF STANDARD

This document is intended to serve as the minimum Huracan requirements for management and mitigation of illness from Heat Stress.

4 OBJECTIVE

To reduce risk to ALARP injury and illness related to Heat Stress while performing duties for Huracan at the wellsite or the workshop. Heat induced illness occurs when your body is unable to cool itself sufficiently and body temperature rises. When heat is absorbed from the environment faster than the body can get rid of it.

5 SCOPE

This Standard applies at all times to all Huracan locations, Huracan employees and relevant contractors.

6 RESPONSIBILITY

6.1 MANAGERS

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 4 of 11

All Managers with the integral support of HSE staff shall implement and enforce this local plan and demonstrate active leadership and participation in all aspects of the Heat Stress Management Plan while ensuring that all personnel under their responsibility demonstrates similar leadership.

6.2 EMPLOYEES

All Employees are to ensure they comply with the Heat Stress Management Plan and present themselves 'Fit for Work' to minimise the initial risk of Heat Stress.

6.3 CONTRACTORS

All contractors are to ensure they comply with the Heat Stress Management Plan and present themselves 'Fit for Work' to minimise the initial risk of Heat Stress.

7 HEAT STRESS

7.1 HEAT STRESS SYMPTOMS

Heat induced illness occurs when your body is unable to cool itself sufficiently and body temperature rises; when heat is absorbed from the environment faster than the body can get rid of it. There are several factors which may contribute to heat-induced illness such as:

Type of work you do;

- high air temperature/humidity levels;
- radiant heat (e.g. working outdoors);
- Physical condition you're in.

Individual factors that may increase your risk of heat stress include:

- medical conditions (like heart problems, diabetes or hypertension)
- medication that may affect your body's temperature regulation
- Your age, weight and level of physical fitness.

Huracan recognise operations conducted during hot conditions poses considerable risk and as such, commit to reducing the risk using effective controls including re-familiarisation training (conducted annually), work / rest cycles and what to do in the event of an emergency. For further information, refer to the Huracan internal Training program (Heat Stress Training).

There are 3 levels of heat-induced illness including:

7.1.1 LEVEL 1: HEAT CRAMPS

Heat cramps often affect people who have sweated a lot during strenuous activity. These painful muscle cramps usually affect the abdomen, arms or legs. Cramps may be an early symptom of the more severe condition of heat exhaustion.

- Tiredness, weakness, nausea / vomiting, dizziness, moist cool skin, may faint

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 5 of 11

In the event of these symptoms the following action must be taken;

1. Stop all strenuous activity and rest in a quiet, cool place
2. Seek medical attention if symptoms continue for more than one (1) hour

7.1.2 LEVEL 2: HEAT STRESS / EXHAUSTION

The body's heat control mechanism becomes over-active

Heat stress warning signs may include:

- heavy sweating;
- headaches;
- tiredness and weakness;
- dizziness or fainting;
- slurred speech or blurred vision;
- nausea and vomiting;
- painful muscles spasms or cramps;
- Rapid pulse, confusion & irritability.

In the event of these symptoms the following action must be taken;

1. Stop all strenuous activity and rest in a quiet, cool place
2. increase fluid intake using cool water
3. lay down in the shade
4. remove outer clothing (e.g. hard hat, boots, shirt)
5. fan vigorously to increase evaporation.

7.1.3 LEVEL 3: HEAT STROKE

First and foremost, Heat Stroke is a medical emergency, caused by a rise in core body temperature, is potentially lethal or can cause permanent injury to the brain & kidneys!

Heat stroke warning signs may include:

- heavy sweating
- nausea and vomiting
- mental confusion, aggression, & visual disturbance;
- seizures & loss of consciousness;
- strong pounding pulse, hot dry flushed skin
- cardiac arrest

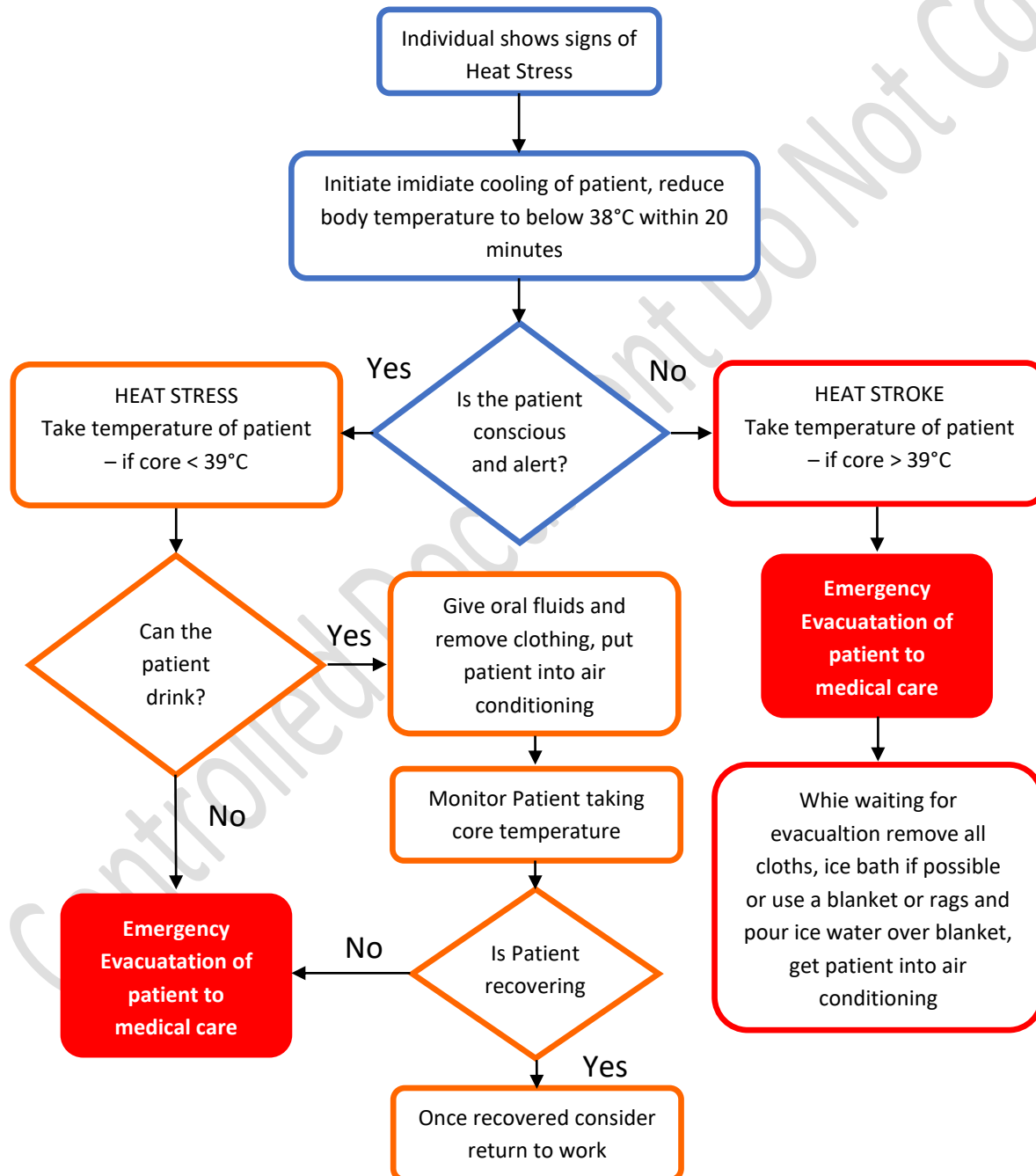
Activate the Huracan Emergency Management Plan immediately including:

1. Follow basic life support (DRSABCD) as required;
2. Loosen clothing & remove unnecessary items i.e. hard hat, gloves, boots & socks

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 6 of 11

3. Lay patient down in a cool environment & apply cold compressions to the neck, armpit and groin areas;
4. Moisten skin with a cool, wet cloth and fan to lower temperature & absorb moisture;
5. Have patient sip fluids slowly if conscious;

7.1.4 HEAT STRESS FLOW CHART



Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 7 of 11

8 HEAT STRESS PREVENTION

To help prevent heat-induced illness incidents occurring, the following should be followed:

1. Ensure you are suitably acclimatised to the weather you are working within;
2. Maintain adequate hydration i.e. drink plenty of water to keep pace with sweat loss, a poor diet and consuming alcohol or caffeine can cause dehydration);

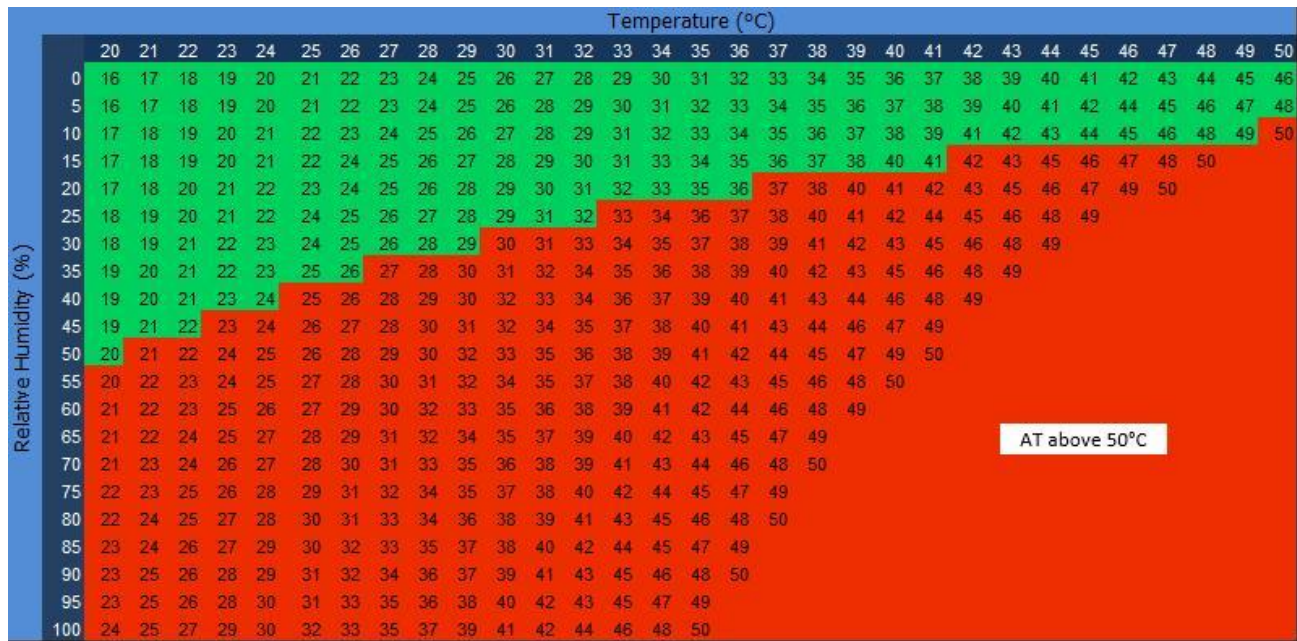
During prolonged work in the heat our body can sweat up to one litre an hour. Unless this fluid is replaced by drinking, progressive dehydration will result.

You won't feel thirsty until you have lost one to 2% of your body weight in fluid. By this time, you will have an increased risk of developing a heat-related illness. Food must be consumed at meal breaks in order to replace electrolytes and maintain energy.

- Check your urine colour every time & adjust your fluid intake accordingly
- Check the apparent temperature (use the Steadman Chart Appendix - A) & implement controls as required
- In the event of a heat-induced illness occurring, provide first aid treatment immediately. If the patient does not improve within 20 minutes, or where more/new symptoms present, assume heat stroke and immediately activate the Kinetic Field Operations ERP for emergency response (continuing first aid measures) and evacuate immediately to medical facility;
- Keep an eye on each other – often, the individual does not comprehend they are suffering from heat-induced illness until it is too late and symptoms have progressed.

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 8 of 11

APPENDIX A STEADMAN APPARENT TEMPERATURE GRAPH



APPENDIX B WORK / REST CYCLE GUIDE FOR WORKING IN HOT CONDITIONS

Apparent Temperature	Work / Rest Cycle	Hydration (1 cup = 250mL)
27°-31°C	50 work:10 rest	1 cup every 20 mins
32°-39°C	40 work:10 rest Minimum Heat Exposure Controls	1 cup every 20 mins
40°-49°C	30 work:10 rest Red Alert Day Controls	1 cup every 15 mins
50°-53°C	20 work:10 rest Red Alert Day Controls	1 cup every 10 mins
≥54°C	10 work:40 rest Red Alert Day Controls Critical/emergency work only	1 cup every 10 mins

Document Owner	Document Approver	Document Number	Control	Rev Date	Next Review	Page
K. Hollingworth	J. Hollingworth	HeatStressMP_Rev1.1	Public	12-Mar-2020	12-Mar-2022	Page 10 of 11