

# Fire and Evacuation Training



# Special Places in Sensitive Environments



## A careless action could lead to disaster .....

- Dispose of cigarette butts responsibly
- Be aware of sparks and other sources of heat
- Report any **fire immediately**

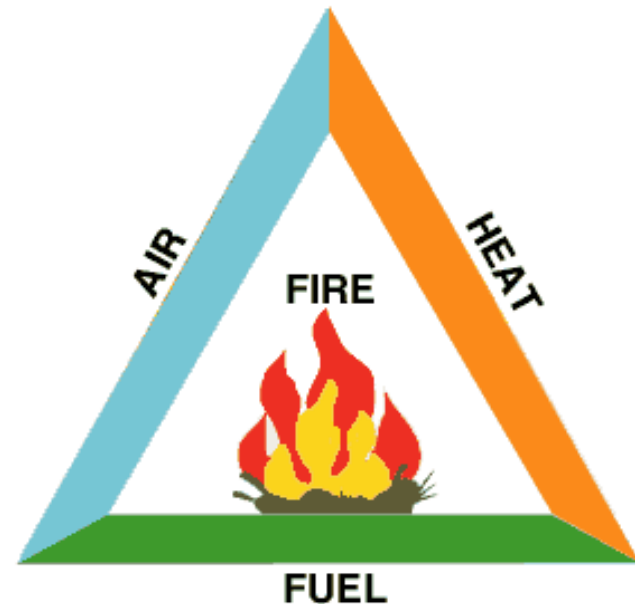
**0-000 ASK FOR FIRE - NOTIFY SECURITY CONTROL  
(4781) 5555 (Townsville) SECURITY 222 (Cairns)**

*Our bushland setting is beautiful but fire can make it deadly!*

# What is Fire?

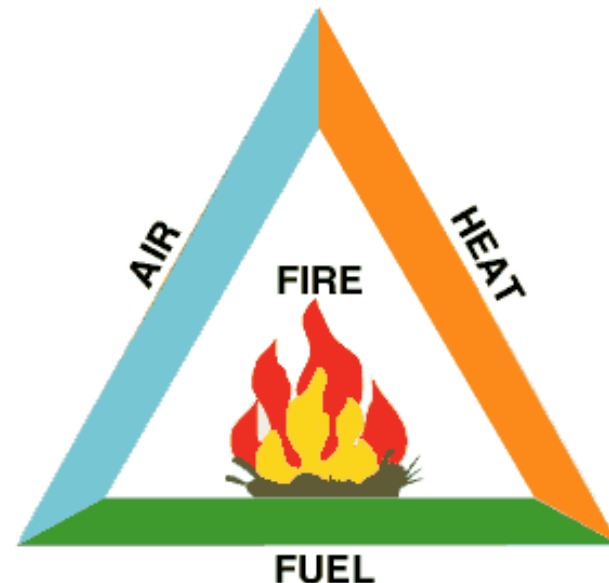
Fire is a Chemical Reaction which is best represented as a triangle which has three essential elements:

- Fuel
- Air (Oxygen)
- Heat (Source of Ignition)



# Fire Triangle

- To fight fire you need to remove one of these elements
- To prevent fire you must ensure these elements do not combine



# WHAT TO DO IF THE FIRE ALARM SOUNDS

- Check your immediate area for a fire;
- Evacuate the building; and
- **Follow Instructions of the Building Wardens and Other Emergency Response Personnel.**

# **IF YOU FIND A FIRE AND THE ALARM HAS NOT SOUNDED**

- **USE A MANUAL CALL POINT IF AVAILABLE**
- **RING 0-000 ASK FOR FIRE, GIVE THEM YOUR LOCATION** then
- **NOTIFY SECURITY CONTROL ON (4781) 5555 (Townsville) OR SECURITY ON 222 (Cairns)**

# What is a Manual Call Point?





# When the Glass is Broken and the Button Pressed ...

- Fire Service Receives an Alarm; and a
- Fire Alarm Sounds.

# Fighting the Fire?

## **On discovering a fire decide whether to fight it or not:**

- Portable fire extinguishers are for small fires - only a small amount of fire fighting agent is available
- It may be more effective to leave a fire and close off the area

## **If you decide to fight a fire, assess the risks:**

- Is the fire confined to a small area?
- Consider whether the fire could spread and block your exit - be sure your back is safe and there is an unobstructed exit behind you
- Have you got the proper extinguisher to fight the fire

**Don't put your life at risk during a fire!**

# To Extinguish Fire ....

The following Equipment may be used:

- Fire Extinguishers
- Hose Reels
- Fire Blankets

**Do Not** attempt to extinguish a Fire unless it is **safe** to do so.

# Classes of Fire

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**Class A** Carbonaceous Solids, e.g. wood, paper and plastics

These fire hazards are commonly encountered in building materials, administrative and accommodation areas

**Class B** Flammable and combustible liquids

These fire hazards are commonly encountered in laboratories and workshops

**Class C** Flammable gases

These fire hazards are commonly encountered in laboratories and workshops

**Class D** Combustible Metals; Magnesium

Inapplicable at the University; require special purpose extinguishers

**Class E** Fire involving energised electrical equipment

These fire hazards are commonly encountered in administrative areas, laboratories, workshops

**Class D** Combustible Metals; Magnesium

Inapplicable at the University; require special purpose extinguishers

**Class E** Fire involving energised electrical equipment














These fire hazards are commonly encountered in administrative areas, laboratories, workshops and accommodation areas

**Class F** Fire involving cooking oils and fats

These fire hazards are commonly encountered in kitchens

# Fire Extinguishers

- There are **six types of portable fire extinguisher**. Each type of extinguisher has particular application to certain Classes of Fire, as indicated in the accompanying guide.
- Fire Services personnel assess the potential fire hazards** present in a building, and equip the workplace with the appropriate types of extinguishers. The right kind of extinguisher for a workplace fire is generally close to hand.

 <b>Fire Protection Association Australia</b>		Portable Fire Extinguisher Guide					<b>Fire Protection Association Australia Website</b> <a href="http://www.fpaa.com.au">www.fpaa.com.au</a>	
		CLASS A	CLASS B	CLASS C	CLASS E	CLASS F		CLASS D
Two colour schemes for fire extinguishers exist		EXTINGUISHANT	Wood Paper Plastics	Flammable & Combustible Liquids	Flammable Gases	Electrically Energised Equipment	Cooking Oils and Fats	<b>CLASS D</b> For fire involving combustible metals use special purpose extinguisher
PRE 1999	FROM 1999							
		WATER	YES	NO	NO	NO	NO	Dangerous if used on flammable liquid, energised electrical equipment and cooking oils-fat fires
		WET CHEMICAL	YES	NO	NO	NO	YES	Dangerous if used on energised electrical equipment
		FOAM	YES	YES	NO	NO	LIMITED	Dangerous if used on energised electrical equipment
		POWDER	YES <small>(ABE)</small> NO <small>(BE)</small>	YES <small>(ABE)</small> YES <small>(BE)</small>	YES <small>(ABE)</small> YES <small>(BE)</small>	YES <small>(ABE)</small> YES <small>(BE)</small>	NO <small>(ABE)</small> LIMITED <small>(BE)</small>	Look carefully at the extinguisher to determine if it is a BE or ABE unit as the capability is different
		CARBON DIOXIDE	LIMITED	LIMITED	LIMITED	YES	LIMITED	Not suitable for outdoor use
		VAPORISING LIQUID	YES	LIMITED	LIMITED	YES	NO	Check the characteristics of the specific extinguishing agent

LIMITED indicates that the extinguishant is not the agent of choice for the class of fire, but that it may have a limited extinguishing capability.  
 Solvents such as alcohol or acetone mix with water and therefore require special foam  
 Green text indicates the class or classes in which agent is most effective

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# How to Use a Fire Extinguisher

You should know the **PASS**-word for using portable fire extinguishers:

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire is extinguished.

**Remember, fire extinguishers are for small fires only - don't endanger yourself when using them.**

**If you have used an extinguisher you should arrange to have it recharged immediately never hang a discharged extinguisher up again.**

# Water Extinguisher Colour – Red

**Suitable for Wood or Paper Fire (Class A fires)**

**Not to be used for Electrical Fires (Class E fires)**

**A 9 Litre Extinguisher will discharge in 60 to 120 Seconds**

**To operate:**

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire is extinguished. Spray as flame subdue.



# CO2 Extinguisher Red with Black Band

**Safe for Electrical Fires (Class E fires)**

**May be used on Flammable Liquids (Class B fires)**

**May be used on Wood & Paper (Class A fires)**

**To operate:**

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire is extinguished. Spray as flame subdue.





# Powder Extinguisher Red with a White Band

A powder (dry chemical) extinguisher is suitable for use on most classes of Fire. All Powder extinguishers at JCU are the ABE type suitable for wood, paper plastics (Class A fires), flammable liquids (Class B fires), flammable gases (Class C fires) and on energised electrical equipment (Class E fires)

It leaves a mess (but who cares if the fire is out)!

**To operate:**

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire is extinguished. Spray as flame subdue.



# Foam Extinguisher Red with Blue Band

Most suited to flammable liquid (Class B) fires. Can be used on wood and paper (Class A) fires. Foam is used to smother the fire and starve it of Oxygen. If the fire is contained aim at the rear of the container and allow foam to form a blanket. If not contained aim foam above flames allowing it to drop onto flames.

## To operate:

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire is extinguished. Spray as flame subdue.



# Wet Chemical Extinguisher

For use on Cooking Oil and Fat fires (Class F fires).  
The extinguishing agent is used to smother the fire  
and cools to a hard mass for ease of removal.

## To operate:

**Pull** the pin or release any other locking device and test.

**Aim** low, pointing the extinguisher nozzle at the base of the fire.

**Squeeze** the handle and release the extinguishing agent.

**Sweep** from side to side at the base of the fire until the fire  
is extinguished. Spray as flame subdue.



# Building Fires - the Hose Reel

Used for Wood, paper and building material fires (Class A fires)

**Dangerous if used on energised electrical equipment  
(Class E fires) as water conducts electricity.**

**Dangerous if used on flammable liquids (Class B fires),  
and cooking oil/fat fires (Class F fires).**

**To operate a hose reel:**

**Turn** Stop Valve to charge Hose

**Release** the nozzle from its clamp

**Run** out the length of hose required

**Turn** on water at the nozzle

**Use** stream or spray

(spray mode may be used to cool gas cylinders in Class C fires).



# Fire Blanket

- Most suited to kitchen fires
- Smothers the Fire
- Can be used to assist in extinguishing burning clothing
- **Should be discarded and replaced after use**

## To use a fire blanket:

**Remove** by pulling down on the tabs

**Hold** by the tapes keeping the blanket between your hands and fire

**Cover** the burning object with the blanket



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# Extinguishing Burning Clothing - Stop, Drop, Roll

**Should your clothing, or that of someone you are with catch fire, follow these steps:**

**STOP!!** Movement or running will intensify the flames.

**DROP!!** Lay flat to the ground. If you remain standing, the flames may burn your upper body and face.

**ROLL!!** Roll slowly on the ground, in a fire blanket or rug if available

**COOL-off** as quickly as possible with water. Apply first aid for burns.

If water or a water fire extinguisher is available, spray it immediately on the person while they roll. This will help reduce another side of the fire triangle: temperature. If the person's clothing is soaked with a flammable liquid before they ignited, rolling is still the preferred method, although it can take considerable effort to put out the fire.

**After the flames have been extinguished, immediately seek medical attention for the person. Do not attempt to remove their burnt clothing or any debris from any of their wounds.**

# Fire Evacuation Plan

Diagrams similar to the following example are displayed in your building to assist you to find Exits and Fire Fighting Equipment.



FIRE EVACUATION PLAN (GROUND FLOOR)

SCALE 1:100



## Fire Exits are Marked

**Ensure Fire Exits in your area are not obstructed.  
If instructed to evacuate the building follow the  
signs, this will provide a safe exit.**





# Building Wardens and Other Emergency Response Personnel

**Building Wardens and Other Emergency  
Response Personnel in your area are identified  
by their cap and vest.**

White cap - Chief Warden

Yellow cap - Floor Warden

Red cap - Warden

Black cap - Security

Blue cap - Safety Officer

Follow Instructions of the Building Wardens and  
Other Emergency Response Personnel.



# Building Evacuation

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In the event of a fire, bomb threat, chemical fumes or spills, gas leak, radiation danger or earthquake .....

**Evacuate the area and proceed to the assembly point when:**

- The alarm sounds continuously; and
- If advised by Emergency Response Personnel.



# Complying with Instructions to Evacuate a Building

A worker or anyone else at a workplace has statutory obligations (WH&S Act 1995 s 36) to comply with the instructions given for workplace health and safety; and also not to wilfully place at risk the health and safety of others or themselves.

In the event of a person refusing an instruction to evacuate a building, Building Wardens and Other Emergency Response personnel must report to the QFRS fire officer that the building has not been evacuated.

QFRS fire officers will take any actions necessary to ensure the building is cleared of personnel.

# Evacuation

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## Evacuation does not mean panic ....

- **Close** doors and windows to slow the spread of fire;
- Take **only** your keys and money;
- Assist **others** who may need help; and
- Remain **calm** and move in an orderly fashion.

## The Person in Charge .....

- Counts Heads as staff students and visitors leave; and
- Final checks toilets, offices and store rooms.

**Knowing that no one is in the building  
is the most important fact.**

# After Exiting the Building

- Proceed to the nearest Assembly Point;
- Follow any instructions given by Building Wardens and Other Emergency Response Personnel; and
- Assist others as required.



# Evacuation

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**Once a building is evacuated do not re-enter the building until advised by emergency personnel that it is safe to do so.**