Photoelectric Smoke Alarm Information Sheet

- The *Australasian Fire and Emergency Service Authorities Council (AFAC)* position is "that all residential accommodation be fitted with photoelectric smoke alarms".
- The Commissioner, Queensland Fire and Rescue Service (QFRS) support's this position.
- Under the *Fire and Rescue Service Act 1990*, domestic dwellings in Queensland must have smoke alarms installed.
- Smoke alarm batteries need changing at least every 12 months, unless they are the lithium long life type.
- Smoke alarms should be tested and cleaned regularly.
- Under *AS 3786* smoke alarms shall have a recommended service life of 10 years.
- Most smoke alarms have an expiry or replace by date on them.
- Smoke alarms must be installed in domestic dwellings on each storey.
- Homes built after 1997, or those substantially renovated since then, must have a 240 volt (hard-wired) system installed at the time of construction.
- There are two main types of residential smoke alarms – *photoelectric* and *ionisation*.

- **Photoelectric Smoke Alarms**
  - Photoelectric smoke alarms give earlier warning of smouldering fires (the most common domestic fire), than other kinds of alarms. Research by the *Australasian Fire and Emergency Service Authorities Council (AFAC)* indicates that photoelectric smoke alarms provide the best detection across a range of fires. This is more likely to alert occupants in time to escape safely.
  - Photoelectric smoke alarms are less prone to nuisance alarms and therefore less likely to be disabled to stop annoying and unwanted alarms.
  - Do not contain radioactive material.
- **Ionisation Alarms**
  - Ionisation alarms may not operate in time to alert occupants early enough to escape from smouldering fires.
  - Prone to nuisance alarms due to cooking.
- Photoelectric smoke alarms are highly recommended by **all** Australian fire services because of their better smoke detection qualities.
- For both flaming fires and smouldering fires, photoelectric smoke alarms are more likely to alert occupants in time to escape safely.

Fact sheet

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RURAL FIRE SERVICE

Queensland Government

Smoke Alarm Replacement

- Queensland legislation made hard-wired smoke alarms compulsory in newly built and substantially renovated homes from 1997 and at least a 9 volt battery operated smoke alarm in pre 1997 built homes.
- Smoke alarms installed in the late 1990's, if they haven't been replaced, are now well past their serviceable life.
- Both hard-wired and battery operated smoke alarms are manufactured to have a recommended service life of at least 10 years under normal conditions of use *(AS 3786)*.
- After 10 years smoke alarms may malfunction and their efficiency compromised with accumulated dust, insects, airborne contaminants and corrosion of electrical circuitry.
- A smoke alarm constantly monitors the air 24 hours a day. At the end of 10 years, it has gone through millions of monitoring cycles. After this much use, components may become less reliable. This means that as the smoke alarm gets older, the potential of failing to detect a fire increases.
- QFRS advises that all smoke alarms need to be replaced after 10 years.
- Most smoke alarms have an expiry or replace by date written on them.
- Most homes will have installed 9 volt battery operated ionisation type smoke alarms as they have been the most commonly available and affordable product on the market.
- Smoke alarm technology has improved over the past decade and the QFRS recommends that when your current smoke alarm becomes faulty or nears the end of its service date, that you replace it with a photoelectric smoke alarm.
- Research by the *Australasian Fire and Emergency Service Authorities Council (AFAC)* indicates that photoelectric smoke alarms (also known as photo-optical smoke alarms) provide the best detection across a range of fires.
- Photoelectric smoke alarms are less prone to nuisance alarms and therefore less likely to be disabled to stop annoying and unwanted alarms.
- Photoelectric smoke alarms do not contain a radio-active element.
- The *Australasian Fire and Emergency Service Authorities Council (AFAC)* position is "that all residential accommodation be fitted with photoelectric smoke alarms" and "that all smoke alarms in single dwellings (Class 1 buildings) be interconnected".

Fact sheet

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