

Haven't the foggiest idea?

Knowing the type of fog is important for deciding when it is likely to clear.

Fog is basically a cloud near ground or sea level. It is formed when the atmosphere can no longer hold its water content at a particular temperature.

When air is cooled it becomes saturated and the temperature at which it becomes saturated is called its dew point. Once air has reached its dew point the water condenses forming tiny water droplets that we see as fog. If this temperature difference happens higher up in the sky, we see it as cloud.

There are two common types of fog usually found at sea, advection fog (sea fog) and radiation fog (land fog).

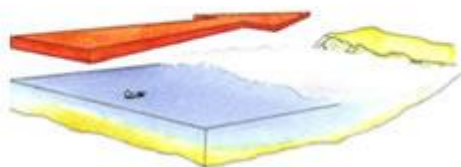
Sea or advection fog

Advection fog is the true sea fog caused by warm moist air moving over cold water.

The cold water cools the lowest layer of air to such an extent that the water vapour in the air condenses to form droplets of liquid water. This is known as the dew point.

Around the UK, advection fog is most common in Spring or early Summer when the water is cold and warm moist air from the southwest moves over it.

There must be light winds to move the air over the water but once the wind speed reaches around 15 knots, the fog lifts off the water and forms low stratus clouds.



However, this type of fog can last for long periods of time, often until there is a change in the air mass.

Radiation or land fog

Radiation fog is a land fog formed during clear nights under high pressure.

Without any cloud cover to blanket the ground, the heat is radiated upwards and is lost in the atmosphere. As the ground cools, the air above it cools. If the air temperature falls below the dew point, fog is formed.



Although this is a land fog, it drifts down rivers and estuaries and finds its way over coastal waters.

As the fog drifts out over the relatively warm sea, the air is warmed and starts to rise, mixing with the air at higher levels.

This combination of warming and mixing is the beginning of the break-up of the fog. The sun will warm the fog from above so over the open sea, radiation fog is quickly dispersed.

The coldest part of the night is around dawn, and the hour after dawn can see the worst of the radiation fog.

The heating of the sun will, on all but the worst days, quickly burn off the fog and a strong wind will rapidly disperse it. Tied up in a marina or at anchor we may be fog-bound in the early morning whilst out to sea it is clear.

Radiation fog is often worse in the autumn and winter, when it can be reluctant to shift all day.

Conclusion

Knowing the type of fog is important for deciding when it is likely to clear; advection fog may well last until there is a change in wind direction and weather system, whilst radiation fog needs heat to burn it off and is likely to be only near the coast and in rivers and estuaries.