

# HYDROGEL

(233-003A)



## About Hydrogel

'Hydrogel' is the common generic name for the polyacrylamide class of polymers. These polymers typically have low density (when dry), are non-toxic - but have the capacity to absorb enormous quantities of water to form a stable gel. Some hydrogels can absorb and hold up to 1000 times their weight in water.

The hydrogel supplied (code 233-003A) is used commercially for water retention in products ranging from nappies to pot plants. In the latter example, one version of the polymer with the trade name Broadleaf is added to the soil in a pot to give extended periods between watering.

Other types of polyacrylamide are used for wallpaper pastes (small packet make up large gel mass) and for the instant snow used in film sets and novelty toys. The latter product is supplied in the form of a powder that hydrates and expands at very high speed. When water is added, it erupts into snow-like particles which occupy a much higher volume. This process is reversible.

Nb. Instant Snow is available from Mindsets.

## Using Hydrogel

Place a small pile of Hydrogel in the centre of a Petri dish and add drops of water from a syringe or pipette. The hydrogel will swell until it can absorb no more water. This can become a simple quantitative experiment by weighing before and after water absorption.

This grade of Hydrogel can be used in the lab to assist the growth of small plants - especially over weekends. The amount added to the soil or growing medium needs to be determined by trial and error.



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