

# Plastic plumbing – insulation

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## Question

Do plastic pipes supplying hot and cold water and central heating require thermal insulation?

## Considerations

- Plastic pipes have a lower thermal diffusivity than copper pipes and therefore lose heat more slowly.
- Approved Document L1 (England & Wales), Technical Handbook – Domestic section 6 (Scotland) and Building Regulations Part F (Northern Ireland) require insulation of certain pipes to reduce unwanted heat loss.
- Plastic pipes have increased resistance to damage from freezing compared with copper pipes. However, freezing of water within the pipes may have a detrimental effect on the performance of the plumbing system.
- NHBC Standards Chapter 8.1.3 Table 1 states the minimum insulation thickness to delay freezing inside domestic premises for cold water systems.
- The Water Supply Regulations (England & Wales), The Water Supply (Water Fittings) (Scotland) Byelaws 2014 and Water Supply Byelaws (Northern Ireland) require insulation of pipework against freezing.

## Answer

Plastic pipes supplying hot and cold water or central heating should be insulated against unwanted heat loss and/or freezing. Plastic pipes should be insulated to the same standard as required for copper pipes in the same location.



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