

Risk of Rodent Damage...

Of the 15 rodent species present in the UK, two (the Norway rat, *Rattus norvegicus*, and the House mouse, *Mus domesticus*) are prone to live commensally and thus may infest domestic or commercial premises if food and harbourage are available. Even if the animals nest in burrows outdoors, they are likely to enter buildings via any structural weakness (e.g. gaps around badly fitted doors) to simply explore or look for food. Grey squirrels (*Sciurus carolinensis*) and Wood mice (*Apodemus sylvaticus*) will also enter buildings opportunistically, although 'infestations' of these 2 species are unlikely to develop.

One of the most striking characteristics of rodents is their incisors which grow continuously from open roots and have chisel-shaped cutting edges. It is a myth that rodents have to gnaw to keep their incisors short – each pair of incisors is kept sharp as the softer dentine on the back of each tooth rubs against the harder enamel on the front surface of the opposing pair.

Is Thermafleece susceptible to rodent damage?

Thermafleece is at no more risk of damage than other similar building materials in the property. Rats and mice can gnaw through any material that is softer than the enamel on their incisors, which registers 5.5 on the geologist's hardness scale. Thus, most building woods, aluminium sheeting, soft mortar and poor quality concrete can be damaged, as well as any kind of insulation material that the incisors can penetrate. It is common to find gnawing damage in any building infested with rats or mice as the animals seek to improve their access. Rodents may also gnaw objects to discover whether there is anything edible beneath the surface.

Mice in particular will incorporate shredded fibrous material into their nests. This could include wood, paper or insulation materials. The quantity of fibrous material will not be insignificant relative to the volume of building materials or insulation in the property.

Surveys of infestation rates in domestic premises as found in English House Condition Surveys. The most recent report, published in July 2005 (available at <http://www.defra.gov.uk>), contained the results of the 2001 survey of 17,500 randomly selected properties throughout England. The overall levels of infestation were 1.4% for mice inside dwellings, 0.3% for rats inside and 2.9% for rats outside. Infestation rates were generally higher in rural locations, as has been found in previous surveys. For comparison, the rates observed in the last published survey carried out in 1996 were 1.8% for mice inside, 0.4% for rats inside and 1.7% for rats outside.

The increase in the rate for rats outside is statistically significant, but it is not possible to state until further surveys are carried out whether the increase is part of an upward trend. Moreover, it was not possible to say that rats found outside buildings necessarily had access to the interior where they could cause structural damage.

Does Thermafleece attract rodents?

Thermafleece does not attract rodents since rodents are primarily motivated by their proximity to a food source rather than proximity to nesting materials. Wool is not a recognised food source for rodents including rats, mice and squirrels.

Rats and mice are omnivorous opportunists that, while generally preferring seeds (especially cereal grains), will eat anything from insects and earthworms to meat, fish and bones and green plant material. Individual colonies of rats and mice can sometimes develop unusual taste preferences perhaps in response to local abundance of a particular food type. For example, it has been recorded that House mice living in some urban areas in the UK selected low-carbohydrate foods such as chicken and tuna and deliberately avoided cereals.

Rodents will only seek alternative food if the preferred food source is unavailable. However, because almost all grease is removed from the wool prior to manufacture, the nutritional content of Thermafleece to rodents is negligibly low. The only risk of damage by feeding would arise if an extremely stressed population was searching for any available food source. In this event, because the nutritional content of Thermafleece is so low, the rodent would quickly explore alternative materials.

Conclusion

The risk of damage to insulation materials such as Thermafleece is more dependent on the risk of the building being infested with rodents rather than the nature of the insulation itself. Thermafleece is at no greater risk of rodent damage than other forms of insulation such as mineral fibre.

This datasheet is based on information provided by the Central Scientific Laboratory.