SUPER TUFT

PREMIUM QUALITY WOOL CARPET

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Should Nylon and PET Plastic Pile carpet be banned in Australia and New Zealand?

Wool is a renewable resource – Wool is naturally flame resistant – Wool absorbs sound – Wool feels soft and natural – Wool is biodegradable

Wool is a natural and renewable resource. As long as there is grass to eat, sheep will continue to produce wool. When wool is disposed of, it will naturally decompose in soil in a matter of months or years, slowly releasing valuable nutrients back into the earth. Synthetic fibres, on the other hand, can be extremely slow to degrade and significantly contribute to the world's overflowing landfills.

HOW DOES WOOL BIODEGRADE?

All materials of animal and vegetable origin have some degree of biodegradability, meaning that they are capable of being decomposed by the action of living organisms, such as fungi and bacteria. Wool is composed of the natural protein keratin, which is similar to the protein that makes up human hair. When keratin is broken down naturally by microorganisms, the products do not pose any environmental hazard.

HOW QUICKLY DOES WOOL BIODEGRADE?

Wool biodegrades readily in as little as three to four months but the rate varies with soil, climate and wool characteristics.[1] This releases essential elements such as nitrogen, sulphur and magnesium back to the soil, able to be taken up by growing plants.[2] Some studies found marked weight loss after only four weeks' burial in soils.[3] Research has shown that processing treatments such as dyeing and antishrink treatment can affect the rate of biodegradation in soil, causing an increase in the initial resistance of wool fabric to degradation. However, this is a short term effect, typically not persisting beyond eight weeks.

WOOL RETURNS ESSENTIAL NUTRIENTS TO THE SOIL

On burial in soil, wool becomes a slowrelease fertiliser providing nutrients for uptake and growth by other organisms. Some have even used wool fertiliser to foster herb and vegetable growth.[4] This is known as natural closed loop recycling; restoring the initial inputs of soil and grass. Other beneficial effects of adding wool to soils include enhanced water holding capacity, improved water infiltration, soil aeration and reduced erosion. Ground-up wool carpet, when used as a fertiliser, increased the dry matter yield of grass growth by 24% to 82%.[5]

WOOL READILY BIODEGRADES IN MOIST, WARM CONDITIONS

On disposal, if wool is kept warm and moist or buried in soil, fungal and bacterial growths develop which produce enzymes that digest wool. On the other hand, thanks to the unique chemical structure of keratin and wool's tough, water-repellent outer membrane, clean and dry wool fibres do not readily degrade. This allows wool products to be resilient and longlasting in normal conditions.

WOOL DOES NOT ADD TO LANDFILL VOLUMES OR MICROFIBRE POLLUTION

Natural fibres biodegrade naturally in a relatively short period in soils and aquatic systems and therefore do not accumulate in landfill and oceans. Results from a University of Canterbury study demonstrate that wool degrades in a marine environment.[6] In contrast, synthetic textiles persist for

many decades and can disintegrate to small fragments. Commonly known as microplastics, or microfibres when less than 5mm in diameter, these fragments accumulate in aquatic environments and land disposal sites where they have negative effects on cosystems when consumed by organisms. A single polyester fleece garment can produce more than 1900 fibres per wash.[7] Ingestion has a negative impact on organisms, sometimes causing death through starvation as plastic replaces food in the stomach.[8] Once in the food chain, microplastics potentially also affect human health via seafood consumption.[9]

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