

TECHNICAL BULLETIN No. 43

DESCRIPTION

The purpose of this Technical Bulletin is to describe the effect that fungi and bacterial growth can have on Novilon cushion floor coverings.

1. INTRODUCTION

Microbes in the form of algae, bacteria and fungi can attack plastics under the right conditions. These microbes produce chemicals that metabolise, degrade and stain plastics by feeding on sources of carbon, nitrogen, phosphorous, trace elements and water at a suitable temperature. Products such as cushion vinyl floor coverings are at a high risk of microbial attack due to the type and amount of plasticisers, stabilisers, backing material and the environment in which the flooring material is laid. The microbe affecting cushion vinyl the most is fungi

2. WHERE FUNGAL GROWTH OCCURS

Fungal problems are more prevalent in coastal areas where conditions of high temperature and humidity occur, however, they are not confined to these areas and can be found in most areas where screed dampness is present.

3. HOW FUNGAL GROWTH OCCURS

- 3.1. Fungi are pervasive and can grow on most surfaces such as rubber, under paint on walls, substrates, adhesives and on flooring.
- 3.2. Fungi can survive in darkness.
- 3.3. Fungi needs little free water.
- 3.4. Fungi can readily convert various large organic substances to smaller molecules which can be utilised by both fungi and bacteria as nutrients.
- 3.5. Fungi exude dyes as part of its metabolic by-products, resulting in staining.
- 3.6. Fungi can remain dormant for long periods under adverse conditions by the formation of spores. These spores will again germinate and grow under favourable condition.

4. DAMAGE TO CUSHION FLOORING

The visible sign of fungal presence in flooring is a discolouration of the product due to the exuded dyes which may be in various colours such as grey, black, brown and red. Once infestation has occurred, discolouration will continue to spread.

5. PREVENTION/ PRECAUTION

Biocides are chemicals that will kill or prevent the growth of micro-organisms. Biocides to combat fungi are defined as:

- 5.1. **FUNGICIDES** – any agent that kills fungi.
- 5.2. **FUNGISTATS** – agents or conditions that prevent the growth of fungi.

6. PROTECTION

Novilon cushion vinyl flooring is protected against fungal attack by the incorporation of a broad spectrum anti-fungal additive during manufacture. Precaution must be taken that fungi will not grow on the adhesive used when fixing Novilon cushion vinyl. It is essential that only FloorworX No. 62 Adhesive, which incorporates an anti-fungal additive, is used.

7. CURE

If the fungal growth is on the surface of the cushion vinyl material, a fungicide can be used to wash and treat the flooring material. However, if the fungal growth is within the flooring material, the affected flooring material must be ripped up and the sub-floor washed with a recommended fungicide. Allow sub-floor to dry completely then relay with a new cushion vinyl flooring material such as Novilon cushion vinyl using FloorworX No. 62 Adhesive.

 For more information please contact the **FloorworX TECHNICAL DEPARTMENT** by sending your query to technical@floorworx.co.za

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