



Contact & Postal Info:

Tel: +27 11 903 9204 Fax: +27 12 212 2341 Web: www.fiberroofing.com E-mail: info@fiberroofing.com P.O.Box 639, Alberton, 1450

FACTORY ADDRESS: INDUSTRIAL SITE - R59, KLIPRIVER, 1871 , GAUTENG, SOUTH AFRICA

# YOUR QUESTIONS ON FIRE RETARDANCY OF SYNTHETIC THATCH ANSWERED.

A summary of the facts discussed in detail below.

- 1. Firstly, why Synthetic Thatch? To replace natural thatch with limited lifespan and high maintenance with a realistic long lasting realistic looking synthetic thatch product which address all the short comings of natural thatch.
- 2. Originally PVC. Discontinued for various reasons.
- 3. Preferred choice, Polypropylene numerous advantages over PVC.
- 4. Obtained a UL94 Class B fire rating.
- 5. An AMST 108 Class A fire rating available but  $\pm$  60% more expensive.
- 6. Lastly but the most important point: All synthetic thatch is only cosmetic. The sub roof (cement, steel sheeting or waterproofed roof ply determine the fire rating.

Summary: A Fire rating on synthetic thatch is irrelevant.

# 1. Why did we develop Synthetic Thatch?

The main drawback on **all Natural Thatch**, whether it is Reed, Grass, Palm Leaves (Alang Alang, Makuti, Bali, and Mexican Heather), Sugar Cane Leaves or Bamboo Leaves is **a limited life span and continues high maintenance costs**.

In addition the facts that only skilled tradesman can carry out maintenance on conventional thatch roofing, as well as the facts that monkeys, baboons and birds cause damage, quite often people are allergic to some of the materials, natural conventional roofs can be infested by insects.

# The original goal posts were to address the above. We were looking for a long lasting, colour fast, maintenance free realistic looking replacement.

**2. Originally we** investigated and **developed** Poly Vinyl Chloride Synthetic Thatch because of its low combustibility.

15 Years ago **every manufacturer** used heavy metal additives in PVC such as mercury, lead and cadmium to achieve colour fastness and ensure longevity of the PVC. Then a worldwide ban prohibited the use of these additives. The result was PVC that does not last and loose colour fast. The few companies that still use PVC supply a warranty with fine print that after five years you have to pay the company to replace the synthetic thatch when it fails. A warranty is given whereby the thatch tiles will be replaced if 50% of the thatch discolours, but this can never happen because more than 50% of the particles are never exposed to the suns UV rays. The warranties are in effect worthless.

Another problem with PVC is that when it burns some of the most deadly and toxic fumes are released. The "Green Peace" movement also has a continued battle against products manufactured from PVC.

We realized the shortcomings of PVC and faced it out within a period of two years.



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### 3. For our Fiber Thatch we use polypropylene particles.

When we realized the shortcomings of PVC we looked at polypropylene. We were fortunate that the raw material suppliers BASF and Clarient assisted us with the development of the Fiber Thatch particles. If you Google these companies it will be clear to you that they are leaders and world renown in their respective fields. The end product was a superior product that was colour fast and will last for more than 50 years. Our confidence in this product is reflected in the 20 year warranty backed by our raw product suppliers.

We achieved what we set out to do: To manufacture Synthetic Thatch that solve all the short comings of natural thatch and are so realistic that only experts will see the difference.

#### 4. We obtained a UL94 Class B fire rating.

As a plus factor, although never intended, the Polypropylene based synthetic products we manufacture were tested for fire spread by Roediger Agencies, an independent test laboratory in South Africa, and the products achieved a Class B rating tested to the UL94 specifications for fire spread.

This Class B fire rating is in reality far better than what any of the natural thatch materials will ever obtain.

#### 5. An A Class AMST 108 fire rating is possible.

To improve the fire rating of our polypropylene, through association with one of the world's leading compound manufacturers, a product was developed that has an AMST 108 Class A fire rating, **but unfortunately the reality is a price increase of ± 60%.** On achieving the Class A fire rating through the fire retardant additives, some of the longevity and colour fastness is also sacrificed but this is minimal.

#### 6. Synthetic thatch is only cosmetic.

Most architects and developers understand that all synthetic thatch is **only cosmetic**. Natural Thatch is between 6 inches to 8 inches (150mm to 200mm) thick and fire is a real problem but the synthetic thatch layer is at the most  $\frac{1}{2}$ inch to 1inch (12.5mm to 25mm) thick. (The "thick look" on custom thatch is created by a "broom like piece" fitted only on the eve of the roof.) This thin layer creates no real danger for fire because the Synthetic Thatch is fitted on top of a sub roof. Sub roofs can be sheet metal (Colour Bond, IBR or Corrugated Iron), a concrete roof or Roof ply (Marine or exterior shutter ply) that has been waterproofed.

It is important to know that the type of sub roof determines the fire requirements and regulations applicable. The thin synthetic cosmetic layer does not affect the fire qualities of the roof. A Fire rating on synthetic thatch is therefore irrelevant.

We trust that the above will answer and explain your questions about the fire rating on synthetic thatch.