Reducing the risk of discolouring fungi on preservative timber

Discolouring fungi on preservative-treated timber is perceived as an increasing problem within the wood preserving industry. The conditions for fungi to establish are a high moisture content of the wood/atmospheric humidity and a favourable temperature, but the extent of infestation can vary due to a number of different factors such as the type of wood, whether the timber has been infected before use, a high spore content in the surrounding environment, the preservative used and any surface treatment applied. Some tips are given below as to how to minimise the risk of attack by discolouring fungi.

Before treatment

1. Make sure that the timber is not attacked by discolouring micro-organisms before treatment
Timber already infected will not be sterilised by the treatment, when the moisture conditions are optimal, the fungi may grow again.

2. Keep all areas clean where the wood (whether treated or not) is stored
Refuse, remnants, sawdust, etc left in damp corners and recesses can easily become infected by discolouring fungi and become a source of spores, thus increasing the risk of infection.

3. Remove sawdust from the surface of the timber after e.g. trimming a package
The sawdust may adversely affect drying and bind water to the timber.

4. Protect the timber against dust
For example, during transportation in the yard, large amounts of dust (shavings, pollen, soil ard sand particles, etc) eddy round and can bind water to the timber.

5. Check that stickers are not infected by discolouring fungi
Infected stickers can easily transfer discolouration to the timber.
See also Point 8
Preservative treatment

6. Anti-mould agents in the treating solution are only a temporary solution!
The anti-mould agents available on the market which are added to treating solutions are only effective for a limited time and are primarily intended to protect timber against discolouring fungi during the drying period. The drying time, however, varies with the time of year. Check the suitable dosage of the anti-mould agent with the supplier. When the wood has reached a moisture content on the surface of 25% or below, the risk of attack by mould can be taken as minimal. Kiln drying will reduce the time when the timber has a moisture content which favours the growth of mould and other discolouring organisms.

After treatment

7. When the treated timber is being dried in a kiln
Remember to keep the kiln clear of refuse and remnants. To reduce the risk of mould, it may be sufficient to render the wood surface-dry quickly.

8. When the treated timber is dried outdoors
To reduce the risk of infection by discolouring fungi, it is important to have good circulation of air in the wood package during drying.

- Keep the packages apart, tall narrow piles, stickers as thick as possible (preferably up to 32 mm)! If the stickers are too thin, the air circulation will be low and the risk of attack increased. Place the stickers so that the timber does not fall down between them, and thus reduce the air circulation.
- Place the piles on 30-40 cm high concrete plinths or similar in order to ensure aerated storage.
- Place the piles to take advantage of the prevailing wind direction.
- Protect the piles against rainfall e.g. under a roof. Tarpaulins should not be laid directly over the piles.

If green timber is kept in a store with walls without air circulation, the risk of mould attack is increased.

9. Protect the treated timber against dust and dirt
See Point 4 above.

After delivery

10. Store the timber protected from rain
The wood must be protected after delivery against moisture to avoid attack by discolouring fungi. Follow the tips above when storing the treated timber. Remember too that the effect of any anti-mould agents declines fairly quickly.