

Bleaching of Wood with Hydrogen Peroxide Solutions

For the bleaching of wood today, aqueous hydrogen peroxide solution is used in most instances because it is a very effective bleaching agent.

Examples of the types of wood which can be bleached with hydrogen peroxide solution, if so required are: maple, beech, birch, pear, ash, cherry, walnut, elm etc.

When bleaching with hydrogen peroxide solution, the following points have to be noted:

- If bleaching is to be done with a 30 – 35 % hydrogen peroxide solution then this should be mixed with **25 % ADLER Bleach Activator 82490**. On the one hand, the bleach activator neutralises the acid stabiliser (usually phosphoric acid) of the hydrogen peroxide solution and activates the bleaching reaction (the release of oxygen from the peroxide). On the other hand, the bleach activator is necessary in order to limit the duration of the reactivity of the hydrogen peroxide. In this way it is ensured that the hydrogen peroxide is completely decomposed (and does not lead to any later damage such as cracking in the varnish coat). This bleach solution is active to its full effective extent for about 1 hour. Therefore, only that quantity must be activated which can be applied in this period of time. The boiling phenomena which are well known when using ammonia do not occur in the mixing of hydrogen peroxide / bleach activator.
- Alternatively, instead of ADLER Bleach Activator, at least **5 %** - but better **10 %** - **ammonia solution (about 25 %)** can be added. This bleach solution must be used immediately. The solution is largely decomposed after 1 hour at the latest and then has only a weak bleaching effect. It is, therefore, always wrong to prepare a day's requirement of bleach solution if this method is used!
If the addition of the ammonia solution is forgotten or too little is added then even subsequent washing of the surfaces cannot prevent later damage!
- After bleaching, the relevant surfaces must dry for at least **24 hours** but better for **48 hours**. If the above-mentioned bleach solutions are used, subsequent washing of the surfaces is not necessary.
- If required, the bleach solution with ADLER Bleach Activator can also be diluted with water which leads to a reduced bleaching effect. Diluted bleach solutions are mostly used in order to achieve a matching of the wood grain for dark woods such as walnut.
- If bleached surfaces are later to be stained with colour stains then adherence to a drying time after the bleaching process of at least **48 hours** is absolutely essential.
- For the varnishing of surfaces bleached with hydrogen peroxide, we primarily recommend solvent-containing types of varnish such as **ADLER Legnopur** or water-thinnable types of paint such as **ADLER Aquasoft CFB** or **ADLER Aquarapid CFB**. Due to their elasticity, these types of paint tend to forgive bleaching faults so that, with this recommendation, you are always on the safe side. With other types of varnish, **with high application quantities, too little ammonia added** and/or **too short a drying time of the bleaching agent**, later damage can occur such as cracking of the varnish coat.

11-02 (restitutes 8-02)

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Our instructions are based on the current state of knowledge and should inform the buyer/user to the best of our knowledge. They are, however, not binding and are to be suited to the field of application and the working conditions. The buyer/user decides on his own responsibility about the suitability and employment of the delivered product. Otherwise our General Terms of Sale apply. With this issue, all previous information sheets are no longer applicable.

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- **Safety Notes:**

Both 30 – 35 % hydrogen peroxide solution and also 25 % ammonia solution (aqueous ammonia) are **corrosive** liquids! Due to the corrosive effect of these solutions, skin, eyes and mucous membranes are particularly endangered by direct contact and the corresponding vapours can irritate eyes and respiratory tracts.

While working wear fastened work clothing, butyl rubber protective gloves and protective eyewear with side protectors! On contact with the eyes, immediately rinse with water and consult a doctor! Immediately take off dirty or soaked clothes! On contact with the skin, immediately wash off with a lot of water and soap!

Observe the Safety Data Sheets!

Bleach solution cannot be stored!

Prepare the mixture in plastic or glass containers - do not use metal vessels!

Do not close the preparation vessel (development of gas)!

Do not empty activated bleach solution back into the supply container (danger of explosion)!