

Technical Data Sheet

ARO-BOND® 540 WOODWORKING ADHESIVE



ARO-BOND® 540 IS A SINGLE COMPONENT PVA WOOD ADHESIVE WITH EXCELLENT WATER RESISTANT CHARACTERISTICS.

ARO-BOND® 540 MEETS THE REQUIREMENTS OF BS EN 204 CATEGORY D4 FOR WATER RESISTANCE, EN 14257 (WATT 91) FOR BOND STRENGTH, AND EN 14256 FOR CREEP RESISTANCE.

Aro-Bond® 540 can be used for many woodworking applications where a high level of water resistance is required, and has been successfully used for hot and cold pressing applications in the manufacture of windows, doors, cabinets, furniture and surface bonding for laminating applications. Aro-Bond® 540 can also be cured using radio frequency equipment.

BENEFITS

- Excellent water resistance - EN 204 D4
- Excellent bond strength - EN 14257 (WATT 91)
- Excellent creep resistance - EN 14256
- Quick curing
- Excellent bond strength on hard and soft woods
- Cures with radio frequency equipment

TECHNICAL DATA

Brookfield viscosity:	4000-10000 mPas
Solids content:	48 +/-2%
Specific gravity:	1.1
pH:	3.0 +/- 0.2

AVAILABLE SIZES

Jerrican	2.5kg
Drum	25kg
IBC	1000kg

COLD PRESS TIMES

Temperature (°C)	15	20	25
Relative humidity %	88	65	65
Time (mins)	40	15	10

HOT PRESS TIMES

Temperature (°C)	50	60	70	80	90	100
Time (mins)	3	2	1 ½	1	½	¼

PREPARATION AND APPLICATION

Ensure that the surfaces to be bonded are smooth, clean and free from dust or other deposits. Wood, plywood, laminated plastics should be of uniform thickness. Some dense hardwoods may require sanding before bonding. For best results the moisture contents of the surfaces to be bonded should be in the range of 7 – 13%, but when pressing at temperatures above 105°C, moisture content should not exceed 10%. Moisture content variation between adjacent components should not be > 3%.

Aro-Bond® 540 should be applied evenly to one substrate using a brush, hand roller or mechanical roller. Adhesive coverage between 80 and 180g sq/m are suitable depending on the surfaces to be bonded. When bonding different timbers, such as teak and high-density hardwoods, the adhesive should be applied to both surfaces of the joint. It should be noted that adhesive spread has considerable influence on both assembly and setting times.

Ideally open assembly time should not be more than 5 minutes

Lay the items to be bonded together within the workable time and press them for as long a time as is needed to achieve the required handling strength. The pressure should be high enough to ensure contact of the parts over the entire area of the joint. Allow 24 hours for full strength to develop. Higher levels of water resistance form more slowly and should be tested not earlier than 7 days after bonding.

Aro-Bond® 540, like all other PVA adhesives, may tend to show structuring especially in cold conditions. This effect is generally reversible on slight stirring. Additionally, there may be some increase in viscosity, but this will not detract from the application properties or performance.

HANDLING AND STORAGE

Clean machines, equipment and tools with water before the adhesive dries.

Aro-Bond® 540 should be stored in the original containers in a cool, dry place, at a temperature range of between 10°C and 30°C. In these conditions it has a storage life of at least 3 months, but it is important to note that Aro-Bond® 540 does have limited stability and is prone to thickening. Aro-Bond® 540 must not be allowed to freeze and ideally should be warmed to at least 15°C before use.

LIMITATIONS

Due to the varied nature of wood components, e.g. depending on the area of growth and the type of pre-treatment, unpredictable discoloration may in some cases appear on different types of wood, such as beech and cherry.

In addition, it is possible that iron together with the tannin in wood can cause discoloration, especially in the case of oak. We recommend that this is tested before final application.

DISCLAIMER: Due to the variation in materials likely to be handled by prospective users of this product, together with differences in production techniques and ultimate performance required, it is important that this product is thoroughly evaluated under production and end use conditions before being commercially adopted. Such an evaluation should incorporate an ageing test and this test should be repeated if the substrates on which the this product is used are changed in any way or are purchased from a different source. During the evaluation and testing of the product, it is the purchasers/end user's responsibility to carry out appropriate actions for the protection of the environment, the health and safety of its employees and purchasers of its products. No employee of Ureka Global Ltd has any authority to waive or change the forgoing provisions. The above recommendations are made in good faith for the guidance of users and are without liability. Any queries should be made in writing to the head office of Ureka Global Ltd.

Revision date: July 2021

