

Technical Manual

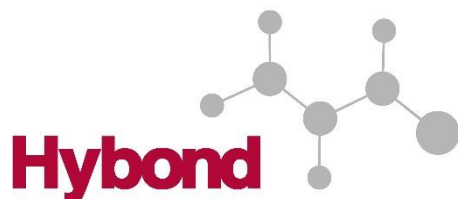
CONSTRUCTION BONDING SYSTEMS



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CONSTRUCTION BONDING SYSTEMS



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OVERVIEW

Hybond Hybrid Polymer Flooring Adhesive represents the very latest development in Hybrid Polymer technology and has been formulated to give the highest levels of performance in terms of bond strength, versatility across many combinations of materials, improved acoustic performance in acoustic installations, resistance to stresses, fast curing speed, and ease and cleanliness of use. Subjected to the most intensive testing and development process, Hybond Hybrid Polymer Flooring Adhesive represents the premium solution for bonding of flooring products and materials, by means of enhancing the performance of the entire system.

When specifying an adhesive, consideration should be given to the temperature range that a floor may be subjected to. Hybond Hybrid Polymer Flooring Adhesive meets the needs of demanding applications as it has excellent high and low temperature resistance, (+90°C to -40°C) which makes it suitable for underfloor heating, underfloor cooling, and areas where floors may be exposed to temperature extremes such as being in direct sunlight.

Designed specifically for use with the Hybond Fastrack DPM sub-floor preparation product, the overall package is simply the best performing, fastest curing, lowest hazard system available. Designed for full surface bonding of both engineered and solid timber flooring, to subfloors including concrete, chipboard, sand/cement screeds, fast setting screeds, anhydrite screeds, timber, cementitious particle board, bamboo and many other similar materials*.

Hybond Hybrid Polymer Flooring Adhesive is also suitable for full surface bonding of many other types of floor finishes, including parquet, engineered timber, ceramic, porcelain, stone, marble, plywood, chipboard and many others.

Hybond Hybrid Polymer Flooring Adhesive is suitable for use with Hybond Fastrack DPM and Hybond Floor Binder where required. Hybond Hybrid Polymer Flooring Adhesive is a single-component adhesive that self-cures to form an elastic and non-shrinkable adhesive layer. The adhesive itself is water resistant, but should never be used as a replacement for Hybond Fastrack DPM where required. The adhesive is specifically designed to accommodate the seasonal movement of solid hardwood flooring. The adhesive is suitable for all wood species according to the BS EN 13556. The adhesive is also suitable for the bonding of gymnasium materials.

SUBSTRATE

Before installation of the flooring, the substrate must be checked to ensure it is suitable and complies with all recommendations laid down by the flooring manufacturer. In accordance with BS 8201; check the moisture content through the entire thickness of the sub-floor with a carbide or electric hygrometer. The moisture content must be as recommended by the flooring manufacturer.

Hybond Hybrid Polymer Flooring Adhesive should be applied to an even, dry, clean and smooth substrate which is free from irregularities and cracks (under 75% RH, or to a floor that Hybond Fastrack DPM has been applied up to a maximum level of 97% RH). Residues of old adhesive may affect the adhesion and must be removed mechanically. Loose or damaged surfaces must be repaired before application of adhesive. Dusty, 'burnt' or excessively dry surfaces must be treated with Hybond Floor Binder. See relevant section of the manual for details. Smooth surfaces such as anhydrite should be roughened and if not already done, surface laitance should be mechanically removed, except in cases where a second-generation product has been used and it is clearly identified that this is not necessary.

When installing a floor on top of marble, terrazzo or ceramic tiles, they must first be cleaned with caustic soda or another suitable cleaner. Once cleaned, rinse the tiles thoroughly with plenty of clean water. Ensure the floor is completely dry before applying Hybond Hybrid Polymer Flooring Adhesive.

A preliminary compatibility test is recommended on every surface.

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FLOORING

The flooring must be acclimatised according to the manufacturer's instructions. All other parameters such as moisture and humidity levels, temperatures etc. must in all cases be within the parameters specified by the flooring materials suppliers.

When laying wood, allow a gap of 2cm (or as recommended by the wood manufacturer) around the perimeter of the laid parquet, including any columns or structures which penetrate the floor.

APPLICATION

Adhesive must be allowed to reach room temperature before application. Apply the adhesive to the surface by means of a suitable notched trowel. Do not apply more than can be covered with the chosen flooring in 30 minutes. Place the flooring into the adhesive layer and tap into place or tamp down with a rubber hammer. A minimum of 80% coverage is required to ensure perfect adhesion. Wait at least 24 hours before sanding and finishing. Adhesive should be allowed to cure for a minimum of at least 24 hours before accepting foot traffic.

Uncured adhesive may be removed from tools and wood with builder's wipes.

Cured adhesive must be removed mechanically.

HEALTH & SAFETY

Refer to the Safety Data Sheet and follow all precautions.

Precautions:

- Never install to substrates which are not protected against possible rising damp. To ensure adequate protection it is best practice and is recommended to use Hybond Fastrack DPM in all cases prior to laying the adhesive
- Do not apply the adhesive at temperatures below 15°C or above 25°C
- Minimum temperature of the substrate should be 15°C
- Avoid installation onto substrates where the moisture is outside of the floor covering manufacturers recommendations
- Never install wood which is too dry, (<7% moisture). This can expand at higher humidity and cause damage
- Do not install if the walls and ceiling of the area are not dry, e.g., after plaster, painting etc.
- Do not dilute the adhesive
- Always mechanically remove any old adhesive residue before bonding
- Do not bond onto bitumen or other sub floor types that may leech oils, waxes, plasticisers etc, without first sealing the floor and isolating the adhesive from contamination, using a two-part epoxy floor sealer
- Under floor heating must be turned off for min 48 hours before application and not re-started for 48 hours after the adhesive has been applied
- Floor manufacturers recommendations to be followed regarding re-starting heating

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TECHNICAL

Base	Modified Silane Polymer
Colour	Straw
Appearance	Thixotropic paste
Consistency	Paste
Labelling	Solvent, water and isocyanate free
Coverage	Approx. 1m ² per kg when used as directed (using notched trowel)
Curing/drying	Chemical self-curing – minimum of 12 hours for foot traffic, 24 hours before load-bearing or sanding/finishing. Up to 7 days where two impervious substrates are in use.
Open/working time	Approx. 30 mins at 21°C & 50% RH. Product is tack-free after 60 mins
Temperature Resistance	-40°C – +90°C (+120°C for a short period) when cured
Specific Gravity	Approx. 1.6g/cm ³ Total Solids: 100% (solvent free)
Tensile strength	[N/mm ²] (ISO 37 DIN 53504) 1.4
Shear strength	[N/mm ²] (wood-wood; DIN 14293) 1.6
Tear strength	[kN/m] (ISO 34-1) 0.51
Application temperature [°C]	from +5°C to +40°C, (subject to floor covering manufacturers recommendations)
Cleaning	Easily cleaned, when wet, from hands and tools with builder's wipes
Shelf Life	12 months in unopened packaging in a cool, dry place at between +5°C and +25°C

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TWO-PART SYSTEM

The above product, REGUPOL Adhesive 46-101, can also be used within a two-part extremely fast-curing system. This two-part system is particularly useful for application to impervious substrates, in scenarios where a building needs to be brought back into use within a rapid time frame, such as within a retail environment. Additional technical data relating to the REGUPOL Adhesive 46-101 two-part system is detailed below.

TWO PART SYSTEM TECHNICAL DATA – COMPONENT PARTS

	REGUPOL Adhesive 46-101	Hardener
Appearance	Low viscosity paste	Liquid
Colour	Straw	Grey
Density [g/cm³] (23°C and 50% RH)	Approx. 1.5	Approx. 1.38
Mixing ratio (volume)	3.64	1
Mixing ratio (weight)	4	1

TWO PART SYSTEM TECHNICAL DATA – MIXED PRODUCT

Appearance	Low viscosity paste
Colour	Grey
Density [g/cm³]	Approx. 1.48 (23°C and 50% RH)
Pot life	Approx. 50 [min] (23°C and 50% RH)
Handling time	Approx. 20 [min] (23°C and 50% RH)
Initial Hardening time [h]	Variable depending upon site conditions, approx. 3-4 hours until next layer can be applied.
Final Hardening time [h]	Approx. 24 (23°C and 50% RH)
Hardness Shore A	Approx. 30 (DIN 53505)
Tensile strength [N/mm²]	Approx. 1.7 (DIN 53504)
Elastic modulus [N/mm²]	Approx. 1.5 (DIN 53504)
Elongation at break [%]	Approx. 130 (DIN 53504)
Application temperature [°C]	From +5 to +40
Temperature Resistance [°C]	From -40 to +90

Hybond Gun Grade Adhesive [RETURN TO CONTENTS](#)

OVERVIEW AND APPLICATION

Hybond Gun Grade Adhesive is a versatile, high specification, 600ml foil gun/trowel applied product, with many uses for bonding most common building materials on either horizontal or vertical surfaces. The very high 'green' strength and immediate grab characteristics of the product allow bonds to be made on vertical surfaces without mechanical support during the adhesive curing time, where the weight of the product being bonded does not exceed the performance of the adhesive, if in doubt, a small trial area should be carried out before bonding commences. Apply by means of a manual or pneumatic applicator. Cut the tip of sausage off and place into suitable cartridge gun. Cut off the top of nozzle flat to leave an 8mm opening. Cut a V shaped profile down into nozzle to a depth of approximately 10mm. Fix nozzle and place cartridge containing sausage in sealant gun. Hold gun at 90° and extrude out a triangular shaped bead, approx. 8mm wide and 10mm high at 250mm centers at right angles to the wall. Using a notched trowel, held at approx. 60°, with notches of approx. 6ml by 5ml, at 8ml intervals, spread the adhesive perpendicular to the beads to ensure full coverage of the surface. One 600ml sausage will bond approximately 2m² of flooring when applied as directed.

- 100% active, solvent and water free
- Permanently flexible – compensates for varying temperatures
- Will bond a wide range of materials including glass, mineral fibre panels, polyurethane, melamine foams and plasticised PVC directly to all common substrates, plasterboard, timber sheeting, concrete etc.
- Odourless
- Excellent gap filling properties for uneven surfaces

Do not use, store or allow to cure below +5°C.

SUBSTRATE

The surfaces to be glued must be sound, clean, dry and free from dust, grease & other contaminants.

TECHNICAL

Base	Hybrid Polymer
Specific Gravity	1.53g/cm ³
Solvent content	Nil
Colour	Buff
Workability	Good, and grooves remain after application
Viscosity	(HBDVII+/S70/10rpm) 250,000 – 300,000cps
Tack free	@ 30 mins at 23°C and 50% RH
Chemical resistance	Excellent
Humidity and water resistance	Excellent
Typical Shear strength (wood/wood)	>1.2N/mm ² (24 hrs)
Application temps	+5°C to +30°C
Temperature resistance	-40°C to +80°C
Complete cure	36-48 hours
Storage	Store in cool, dry conditions between +5°C and +25°C Ensure good ventilation. Storage outside these parameters will dramatically reduce shelf life Opened foils must be closed airtight and used within 1 month
Shelf life	12 months from date of manufacture when stored as directed

Hybond Fastrack DPM [RETURN TO CONTENTS](#)

OVERVIEW

Hybond Fastrack DPM is a ready-for-use, one part, water-based moisture vapour suppressant and DPM.

USES

When used as directed, the product is a surface moisture vapour suppressant developed to suppress residual construction moisture and rising damp in cementitious subfloors including power floated concrete and sand/cement screeds. Consideration should be given to the fact that if a self-levelling compound is required it will be below the DPM layer and should be suitable for this environment.

Do not lay self-levelling compound over Hybond Fastrack DPM.

Hybond Fastrack DPM is designed to work with a full surface coating of Hybond Hybrid Polymer Flooring Adhesive as part of the installation of a variety of flooring systems, for ultimate performance. Not recommended for application onto Gypsum based screeds, Anhydrite (calcium sulphate), bitumen or resin subfloors. *Floors which are dusty, or excessively dry must be treated with a suitable primer (Hybond Floor Binder) before using Hybond Fastrack DPM.

KEY BENEFITS SUMMARY

Designed to work as a DPM/moisture vapour suppressant prior to the application of a full coverage of Hybond Hybrid Polymer Flooring Adhesive.

Water based, low VOC.

Easy to apply – generally primer-less application and single component, no mixing required.

Suitable for heated concrete and sand cement screeds (provided the surface temperature does not exceed 27°C in accordance with BS 8203 and BS 5325).

Extremely fast drying – as quick as 30 minutes, depending on environmental conditions.

Colour change technology to demonstrate when the product is ready for adhesive application.

High bond strength to subfloors and to Hybond Hybrid Polymer Flooring Adhesive.

USAGE GUIDELINES

Standards

All aspects of the installation must be in accordance with the requirements of BS 8204, BS 8203 (Installation of Resilient floorcoverings) or BS 5325 (Installation of Textile floorcoverings) and supplementary specifications and BS 8201.

Moisture Testing

(In accordance with British Standards 8203)

Hygrometer readings must be taken and recorded.

The sealing effect of concrete curing compounds and over-trowelled concrete will extend the time taken for the hygrometer to reach equilibrium.

Subfloor measurement readings of up to 97% RH (measurable) can be accommodated with the system of DPM and a full surface covering of Hybond Hybrid Polymer Flooring Adhesive. (97% RH equates to approx. 8.5%MC in sand/cement screed and 6%MC in concrete).

Conditioning

Condition the contents by storing for 24 hours at +15°C to +25°C as cooler temperatures will increase viscosity and make application more difficult. Higher temperatures will speed the chemical reaction and therefore reduce working pot life.

Hybond Fastrack DPM CONTINUED [RETURN TO CONTENTS](#)

PREPARATION

Ensure the subfloor is clean, sound, surface dry and free from contaminants that may prevent adhesion. All dust and plaster deposits must be removed and vacuumed.
Remove all surface water. Highly polished surfaces or concrete containing a curing agent or surface hardener may require shot blasting.
Power floated concrete must be abraded or shot blasted to provide a good key for adhesion.

Priming

In most circumstances no priming is required.
For floors with excessively dry and absorbent surfaces, or floors that are dusty/burnt, a primer (Rapid Floor Binder) will be required. Always test a small area first to confirm suitability.

APPLICATION

Note: drying times are based on ambient conditions, and will be slower in cold and/or wet conditions. Good ventilation is essential. Shake the bottle to mix contents immediately prior to use. Pour into a rectangular bucket or paint tray and apply with a medium pile roller. It is essential that a pin-hole free coating is achieved and to maintain a coverage rate of 5 m² per kg per coat. (i.e., 5 kg unit covers 25m²). The overall dry film coating thickness should be a minimum of 150 microns. Do not over-apply. Always apply Hybond Fastrack DPM up the walls to a height of approx. two inches above floor level as a precaution. Allow to dry to a translucent film. At 20°C the drying time will be approximately 30 minutes, depending on the subfloor and other environmental conditions. Once dry, it is advisable to begin application of Hybond Hybrid Polymer Flooring Adhesive as soon as possible, to prevent surface contamination. Always apply the adhesive within 2 days after application.

HEALTH & SAFETY

Refer to the Safety Data Sheet and follow all precautions.

TECHNICAL

Colour	White emulsion when wet, becoming blue/grey on application, translucent when dry
Packaging	kg plastic jerricans
Composition	DPM is a modified synthetic polymer emulsion
Performance	(Typical Values) CURE TIME (at 20°C) Approximate 1/2 hour
Coverage	Approx. 25m ² per 5 kg unit
Cleaning	Clean immediately after use with water or white spirit if the product has dried
Storage	Store between +5°C and +40°C in shaded dry conditions. Protect from frost
Shelf Life	12 months, min when stored in its original unopened containers

Hybond Floor Binder [RETURN TO CONTENTS](#)

OVERVIEW

Hybond Floor Binder is a universal primer for porous substrates, it is always recommended to use this product when bonding onto cementitious boards.

KEY BENEFITS SUMMARY

Removes the adverse effects of certain undesirable sub-floor characteristics that can interfere with the smooth application of Hybond Fastrack DPM, and Hybond Hybrid Polymer Flooring Adhesive. An excessively dry or absorbent subfloor, or a dusty, 'burnt' surface are the main reasons to use Hybond Floor Binder.

USAGE GUIDELINES

Standards

All aspects of the installation must be in accordance with the requirements of BS 8204, BS 8203 (Installation of Resilient Floorcoverings) or BS 5325 (Installation of Textile Floorcoverings) and supplementary specifications.

PREPARATION

- Ensure all surfaces to be coated are clean, dry, frost free and free from grease, oil, dirt, dust, loose friable material and any other contaminants.
- Mechanical preparation, using an enclosed shotblasting machine, may be recommended and should be followed by thorough vacuuming to remove all surface dust.

APPLICATION

Apply by brush or roller ensuring a continuous film, avoiding puddles and ensuring all the surface is coated. Provided surface preparation instructions are followed and surface laitance has been mechanically removed. Hybond Floor Binder is suitable for use on anhydrite sub-floors.

HEALTH & SAFETY

Refer to the Safety Data Sheet and follow all precautions.

TECHNICAL

Colour	White
Packaging	5 litres
Composition	Aqueous based co-polymer dispersion
Characteristics (Typical Values)	
Density	1.02 g/ml
pH	7-9
Coverage Rate	8 m ² per litre depending on substrate.
Storage	Store in dry, shaded conditions between +5°C and +35°C
Shelf Life	6 months when stored as recommended in original unopened packaging

FURTHER INFORMATION

Before using any products, the user should carry out any necessary tests in order to ensure the product is suitable for the intended application.

Moreover, all users should contact the seller or the manufacturer of the product for additional technical information concerning its use if they think that the information in their possession needs to be clarified in any way, whether for normal use or a specific application of our product.

The information detailed in the present technical data sheet is given by way of indication and is not exhaustive. The same applies to any information provided verbally by telephone to any prospective or existing customer

NOTE: The information in this manual is given in good faith and is based upon experience and experimentation. Because of the diversity of materials and substrates and the great number of possible applications which are outside of our control, we cannot accept any responsibility for the results obtained. In every case it is recommended that the user carries out preliminary trials to ensure the suitability of the product for their intended use

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