

Unobond

Solvent-free, quick-setting, Gel polyurethane adhesive

Water-resistant bonding (D4 classification)

Suitable for marine environments.

Description

Unobond is a single-pack structural grade moisture-curing fast-setting polyurethane adhesive. Fully cured, a joint bonded with Unobond is deemed structural and a D4 classification for water resistance.

Unobond is a most versatile adhesive, not only able to bond porous to porous but also porous non-porous substrates, including timber, plasterboard, fibrous cement, stainless steel and many other metals, EPS foam, concrete, brick, some plastics (testing is recommended) and most other common substrates, providing that one or two of the surfaces contain moisture.

Unobond foams and expands slightly, forcing its way into gaps, surface irregularities in each of the mating surfaces, therefore maximising the bonded area of any joint.

Uses

- General construction adhesive.
- Most common construction materials: metal, wood, concrete
- Floor mouldings and skirting boards.
- Manufacturing of furniture and cabinets
- Display signs.
- Extensively used in wooden boat building.
- Also suitable for exterior woodwork.

Benefits

- Superior bond strength
- No mixing
- Fast setting 1-2 hours, full cure 24h.
- Extremely versatile
- Resists low temperatures
- D4 Rated 100% waterproof, withstands a 72-hour boiling water test.
- Paintable. With acrylic, oil, and rubber-based paints. (preliminary tests suggested).
- Ready to use – no mixing, single pack.
- Proven long-term durability and resilient.



- Non-toxic, low VOC meets “green star” environmental criteria.
- Compatible and exceptional adhesion with all common building materials, cementitious, brick, ceramics, glass, metals, wood, epoxy, polyester, and acrylic resin substrates.
- Suitable for internal & external applications.
- Invisible in tight-fitting bond lines.
- Non-corrosive to most surfaces, including galvanised and zinc-coated steel and concrete.

Acceptable Substrates

UNOBOND has excellent adhesion to all common building materials.

- Wood, soft and hard
- Plasterboard
- Particleboard
- Aluminium
- Iron, steel, sheet metal
- Polystyrene and insulation foam
- Concrete, FC Sheeting
- Brick, masonry
- Veneer, melamine
- And many plastics (testing is recommended) and many other common substrates.

UNOBOND will adhere all these products to themselves or to one another, provided one of the two surfaces contains moisture.

Adheseal: Unobond TDS

Limitations.

Adheseal Unobond is NOT suitable for use in the following applications: -

- When used as a gap filler, the strength of the adhesive is reduced.
- To achieve maximum strength, pressure is required during the period of curing. This can be achieved by clamping, screwing, or nailing.
- Totally confined spaces, as the sealant requires atmospheric humidity to cure, it will not cure where it does not have access to moisture/humidity.
- Adhering mirrors (high power 609 can be used - test first)
- Structural glazing (n-80 or n-60 glazing silicone).

Application

Surface preparation:

All surfaces must be structurally sound, stable, dry, clean, and free of dust, loose, flaking, friable material and free from oils, grease, form release agents, curing compounds, and any other surface contamination that may hinder adhesion. Substrate must have adequate moisture to activate the curing process, but be free of surface water. Concrete must be allowed to cure for at least 28 days. Failure to do so may result in poor adhesion and subsequent delamination. Use the two-wipe process for impervious substrates. Ensure the cloths are clean and changed frequently and use a suitable cleaner/solvent such as xylene.

Installation:

Ensure adequate tests are conducted before using commercially.

At least one of the surfaces must have a moisture content of at least 8%. The product will not cure if there is no moisture available from the substrate.

Application Instructions

Metal surfaces should be lightly sanded and wiped with Adheseal Xylene solvent.

All joints must be close-fitting. Maximum glue line thickness is 0.5mm (ideally 0.1 to 0.25 mm).

Unobond expands slightly, therefore filling small irregularities in the surfaces to be bonded.

Apply at temperatures between 5°C to 35°C.

Cut nozzle at 45° angle to desired thickness. Cut open the cartridge and attach the nozzle. Insert the cartridge and nozzle into the cartridge gun. Hold the gun at 45° angle with the nozzle in contact with the surface to be bonded. Keep the adhesive approximately 10mm in from the external edge to minimise 'squeeze-out'.

Apply by dispensing adhesive over one face of the surfaces to be bonded, then tool off with a spatula, ensuring adhesive is evenly spread before the skin forms, approximately 10 minutes. While the adhesive is still wet, A mist of water can be sprayed over the other surface, which will assist curing during dry, cool conditions and on non-porous surfaces
Bring both surfaces together immediately and clamp tightly and evenly to ensure proper spread of the adhesive and to produce a glue line 0.1mm to 0.25mm thick. Clamps need to remain in place for at least 60 minutes at 23°C and 50% relative humidity.
Apply enough pressure to bring joints tightly together with some glue "squeeze out". Clamping Pressures Softwoods 50 PSI & Hardwoods 150 PSI Allow any 'squeeze-out' adhesive to dry and then remove with a sharp blade. Do not try to remove the 'squeeze-out' adhesive before it dries as this will spread the adhesive over the surface and is very difficult to remove.

Once opened UNOBOND will begin to cure. It is recommended that the tip of the cartridge be sealed to extend the life of the product

Always carry out compatibility tests where contact with potentially incompatible materials occurs.

Unobond is an adhesive, not a mastic and therefore is not suitable as a gap filler. If used as a gap filler, the strength of the bond is reduced. Adheseal have our GapFilla product for the filling of cracks, etc.

To stop floors from squeaking, apply a bead into the groove of each panel before mating the tongue with the next panel. The excess Unobond will expand, taking up any void that is present in the tongue and groove. For flooring applications, the adhesive should be applied according to the flooring manufacturer's specifications.

Some Unobond adhesive may expand out of the joint; this can be removed without clogging sandpaper or blunting cutting tools

Coverage

120gm – 250gm per m².

Coverage will vary depending on the surface profile.

A 300ml cartridge will cover between 1.2 - 2.5m².

Cure Time.

Allow approximately 10 minutes skin time, full cure 24 hours @23dg & 50% humidity. Please note that all cure times vary depending on atmospheric conditions and moisture in the substrate.

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Clean Up.

While the product is still wet, tools and spills can be cleaned with Xylene. The cured product can be removed by mechanical means.

For cleaning skin, use Adheseal Hand Wipes.

Colour

Uncured; Translucent. Cured Cream/brown

Packaging

310ml Cartridge
UNOBOND/CTG

Note:

Before application, refer to all relevant TDSs and SDSs' detailed product specifications & application instructions.

Adheseal B.A.T. Program (Bond Adhesion Testing) Program.

For over 15 years, Adheseal has offered a service in which a program has been established to help eliminate potential site problems by pre-testing Adheseal sealants and adhesives with most building materials to which our Sealants and adhesives are applied.

This service is available for projects where pre-installation testing of our products will aid in determining the best application methodology to achieve optimum adhesion. Contact your Adheseal representative for further information.

Specification:

The information contained in this TDS is typical but does not constitute a full specification, as conditions and specific requirements may vary from project to project. The instructions should be considered as a minimum requirement. The applicator or contractor must use their skill, knowledge, and experience to carry out additional works as may be necessary to meet the requirements of the project. Specifications for specific projects should be sought from the company in writing.

Physical Properties

Type of product	Polyurethane Adhesive
Curing system	Moisture
Cure Time	24 Hours
Density (specific gravity)	1.03 ±0.05
Pressing Time	1hr @ 0.6 N/mm ²
Tensile Strength	5N/mm ²
Tear Resistance	Up to 130kg/cm ²
Application temperature	+5°C to +35°C
Service Temp	-30°C to +100°C
Working Time	15m @ 23°C & 50% RH
Skinning Time	10m @ 23°C & 50% RH
%Volatile by Volume	<1%
Shelf life	12 months in original packaging
Storage: Cool and Dry between	15°C and 25°C
Resistance	Insensitive to Frost, Sensitive to Humidity (cures product), unflammable
D Classification	Classified D4 water-resistant bond
Colour	Uncured: Translucent. Cured: Cream/brown
Packaging	300ml cartridge

Conditions Of Use and Disclaimer:

The information contained in this TDS is given in good faith based upon our current knowledge and does not imply warranty, express or implied. The information is provided, and the product is sold on the basis that the product is used for its intended purpose and is used in a proper workman-like manner in accordance with the instructions of the TDS in suitable and safe working conditions. Under no circumstances will the Company be liable for loss, consequential or otherwise, arising from the use of the product.

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Health and Safety

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Supply fresh air. If required, provide artificial respiration. Keep the patient warm. Consult a doctor if symptoms persist. In case of unconsciousness, place the patient stably in the side position for transportation

Skin Contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

Eye contact: Rinse the open eye for several minutes under running water. Then consult a doctor

Ingestion: Do not induce vomiting; call for medical help immediately

PPE for First Aiders: Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists, wear an organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from Nitrile Rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash your hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically. Effects may be delayed. No further relevant information available

Signal Word

Warning



Brisbane North 26 Wolverhampton St, Stafford QLD 4053

Brisbane South 8 Moss St, Slacks Creek

Sunshine Coast 18 Kessling Ave, Kunda Park QLD 4556

Gold Coast 12 Distribution AV Molendinar QLD 4214

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