

REFORAC

Ready for any challenge

REFORAC UPPER BOND

Acrylic foam tapes

Structural bonding tape for
best results

- TESTED
- DURABLE
- SUPERIOR BONDING



REFORAC UPPER BOND ACRYLIC FOAM TAPES



THE MOST ADVANCED INDUSTRIAL TAPE OFFERS YOU THE BEST RESULTS FOR ANY APPLICATION!

REFORAC IS READY FOR ANY CHALLENGE!

You would like to shorten the process time of your production process, but have to wait until the structural silicone sealant has cured? You want to bond various materials together, but your tapes have insufficient adhesion? The adhesive bonds you are using at the moment lose their bonding strength because of temperature differences? You are looking for an adhesive bond that is environmentally friendly and long lasting? Look no further - we have a ground breaking product that meets all of your requirements:

REFORAC ACRYLIC FOAM TAPES!

Outside of Europe, Reforac UPPER BOND has been known as a producer of high-quality adhesives, tapes, coatings and sealants for industrial applications for more than 25 years.

With the Reforac UPPER BOND acrylic foam tapes, Reforac UPPER BOND has developed a revolutionary series of structural bonding tapes with qualities that exceed the performance of existing tapes, adhesives and mechanical bonds.

Besides superior and invisible bonding, a fast initial tack and enduring visco-elasticity in the most extreme weather conditions, Reforac tapes help speed up the production process and considerably lower production costs. With these production and process advantages, Reforac UPPER BOND tapes offer the best solution for industrial assembling applications making bonding with screws, rivets, spot welding and liquid

adhesives, unnecessary in many applications.

REFORAC TAPES: DURABLE SUPERIOR BONDING ON SMOOTH AND ROUGH MATERIALS

Reforac tapes compensate all irregularities and tolerance differences and therefore these tapes offer the best assembly solutions for joining similar or different materials. Reforac UPPER BOND can be used to join together both smooth materials (such as glass and metal) and less smooth materials which are difficult to join (such as plastics and composites).

Reforac UPPER BOND tapes are strong and durable and can be invisibly butted together. An extra advantage compared to mechanical fixings is that there is no pressure point because forces are spread equally over the entire surface with tape. In short, Reforac tapes offer you the best assembly solution.

REFORAC TAPES: FASTER PRODUCTION PROCESS AND LOWER PRODUCTION COSTS

Because of their extremely high initial bond strength - Reforac tapes reach half of their maximum adhesion strength after only 20 minutes - compounds and panels can be moved, processed and shipped much quicker in pre-assembly.

This considerably speeds up the production process and process time in the prefabrication and assembly stages.

Reforac tapes also enable you to work more efficiently. The tapes are easier,

BY USING REFORAC TAPES, YOUR PRODUCTIVITY AND TURNOVER RATE WILL INCREASE SIGNIFICANTLY WHILST STOCK REDUCES FASTER.'

quicker, more precise and safer to apply than liquid adhesive and structural silicone sealant and don't spill. This makes re-finishing unnecessary.

- Increased production output
- Quick initial tack speeds up the production process
- Short application time reduces labour costs
- Less material costs and **substitutes** structural silicone sealing in combination with spacer tapes
- Lower failure costs in production process
- No more need for temporary clamping
- No more need for expensive tools and caulking guns
- Environmentally friendlier for your employees
- No more waste
- No more re-finish

REFORAC TAPES ENVIRONMENTALLY FRIENDLIER: NO SILICONE OR SOLVENTS

Reforac UPPER BOND is a double coated tape with an acrylic adhesive, produced in accordance with TS16949 quality standards ISO 9001 and ISO 14001, that cures under UV light during the production process. During production, SPC (Statistical Process Control) is used. The tape has a PE protective liner that does not contain silicone. This makes Reforac tape a green product with a VOC value of zero. Most polyurethane adhesives used on the other hand contain Isocyanate and have a VOC value between 50 and 90 g/ml.

REFORAC TAPES CAN HANDLE BOTH SHRINKAGE AND EXPANSION

Because of their high visco-elasticity, Reforac tapes can expand to 3 times their thickness and restore to their



original size in extreme temperature differences, without affecting their bonding. Reforac tapes keep their elasticity, even in the most extreme weather conditions without any risk. Shrinkage and expansion are therefore well taken care of, risk-free. It is one of the reasons for the durability of Reforac tapes.

REFORAC TAPES SUPER STRONG BONDING WITH EXCELLENT LONG-TERM AGEING PROPERTIES

Even in the most extreme and continuously bad weather conditions, Reforac tapes keep excelling. The tapes do not degrade or discolour and they retain excellent adhesive force.

Therefore, Reforac tapes last much longer than conventional PU and PE tapes.

The tapes have been UL 746 C tested and exceed the requirements for frame bonding. Exposure for 2000 hours* to 85% relative humidity at +85 °C has moreover shown that Reforac tapes are by far the best at withstanding extreme conditions. Bonding tapes moreover eliminate risks of metal fatigue or corrosion, which do occur in mechanical fixings.

**Twice the IEC 61215 requirement.*

REFORAC UPPER BOND ACRYLIC FOAM TAPES



REFORAC TAPES HIGH SHOCK ABSORPTION

Reforac tapes' high visco-elasticity makes them absorb vibrations and shocks without the bonding quality being affected. Partly because of their noise-dampening, noise-reducing and weight-saving qualities, Reforac tapes are extremely well suited for assembly applications in the transport sector: automotive, bus and truck, train, marine and aviation.

IN SHORT, WITH REFORAC TAPES THE BEST PERFORMANCE IS GUARANTEED

- Superior bonding
- Remains elastic, even in the most extreme weather conditions
- Resistant to thermal expansion and shrinkage
- No fatigue or ageing
- Adheres to various substrates such as all metals, glass, composites plastics and painted wood
- Extremely good anti-vibration and shock absorption
- Acrylic base, therefore environmentally friendly

'BECAUSE OF THEIR SUPERIOR AND DURABLE BONDING QUALITIES, REFORAC TAPES HAVE EVEN COME OUT ON TOP IN BOMB BLAST RESISTANT GLAZING APPLICATIONS, IN ACCORDANCE WITH ISO 16933.'

- No polyurethane, solvents or silicones, with a VOC value of zero

REFORAC TAPES: THE BEST ALTERNATIVE FOR MECHANICAL ADHESIVE SYSTEMS AND LIQUID ADHESIVES

In comparison with mechanical adhesive systems, liquid adhesives and structural silicone sealants, Reforac tapes have the following advantages:

- Long-term and highly resistant to the effects of UV radiation and climate and temperature changes
- No stress points that arise with mechanical fixings (load and stress is spread across the plane of the bond)
- No more risk of leakage, fatigue, mechanical degradation or corrosion
- Shrinkage and expansion are no longer a problem due to great stress relaxation properties
- More resistant to most chemicals and solvents, cleaning products, salt and water
- Durable and aesthetically pleasing invisible fixing and bonding
- Easy, clean and simple to apply without using tools
- Cleaning, re-finishing and painting unnecessary
- No sound transmission

These qualities guarantee a more efficient and profitable production process when using Reforac UPPER BOND.





YOUR ADVANTAGES:

- **SHORTER PROCESS TIME**
- **LOWER PRODUCTION COSTS**
- **EASY AND FAST PROCESSING**
- **LONG-TERM LIFESPAN**

APPLICATIONS

Reforac tapes are successfully used in: installation in the building industry (interiors, finish & architecture), electronics, automotive, construction of buses, caravans and yachts, solar panel industry, advertisement and sign industry, façade panelling and structural glazing and glass industry.

Reforac is ready for any challenge, even when you think it's impossible. Every application does have specific requirements, and the choice of tape depends on the purpose for which the tape is used in specific circumstances at hand. Reforac UPPER BOND has a customised solution for every challenge and we are happy to assist you with expert advice.

Structural bonding

Application of Reforac tapes is recommended for, among others, fixing panels, bonding glass to metal frames, fixing metal panels, structural bonding and other, technically challenging adhesive constructions. An example of successful application of structural bonding: Reforac tapes have been used, among others, in the installation of structural glazing, for instance for the Radisson Blu Hotel near Zurich Airport. Because of the invisible and superior bonding. Reforac UPPER BOND lead to the best aesthetic and constructive result with superior long term durability!

Window and door manufacturing, partition systems, signage, white goods and consumer electronics

Reforac tapes are very suitable for installation applications in automotive construction and the construction of buses, caravans and yachts, due to the following advantages:

- Shock and damping properties
- Resistance to all types of weather
- Shorter drive-awaytime because of easy application and high initial bond strength
- Weight efficient and therefore fuel saving
- Less maintenance

Display industry & Corporate Identity

Use of Reforac UPPER BOND also has many advantages for the display & sign industry. Sheetting can be bonded much quicker and longer lasting using Reforac tapes, without silicone sealant. Frames can be assembled much quicker without sealant's long curing time, making it possible to ship the same day. Façade lettering can be mounted quickly and easily without drill or screw. In this sector, use of the transparent tapes

allows for both aesthetic and process advantages.

Façade cladding

Aluminium composite panels can be fixed quickly and easily to a façade using Reforac tapes. The tapes are resistant to UV, extreme temperatures, rain and sun. They offer a lasting, maintenance-free and aesthetically pleasing façade finish.



USING REFORAC TAPES, FAÇADE LETTERING IS EASILY MOUNTED WITHOUT BOLTS AND SCREWS. BOTH THE BASE PANELS AND THE INDIVIDUAL LOGO ELEMENTS CAN BE FIXED WITH REFORAC UPPER BOND TAPES.



REFORAC UPPER BOND ACRYLIC FOAM TAPES



FAÇADE CLADDING FIXED WITH REFORAC TAPES IS RESISTANT TO ALL WEATHER CONDITIONS, NO MATTER HOW EXTREME THEY MAY BE.

EXTREMELY RELIABLE

Reforac UPPER BOND tapes are 100% guaranteed and certified reliably. We therefore have only satisfied and loyal customers.

CERTIFICATES

The Reforac grey acrylic foam tapes 7080G (0,8 mm thick) and 7200G (2 mm thick) and all sizes in between, have been tested in accordance with the UL 746 C* test method and measuring values. This test, required by the solar industry, has been run on glass, aluminium, galvanised RVS, Tedlar (PVF) and Noryl plastic (PPE).

**UL 746C is the standard for polymer materials and is used in installation techniques.*

TEST METHODS

Reforac tapes have been extensively tested for shear, peel and tensile strength in accordance with current standards. Those tests have shown that these tapes offer the highest peel and cleavage strength and the highest shear and tensile strength. These tests once more show the superior bonding qualities of Reforac tapes.

REFORAC, DURABLE PREMIUM QUALITY!

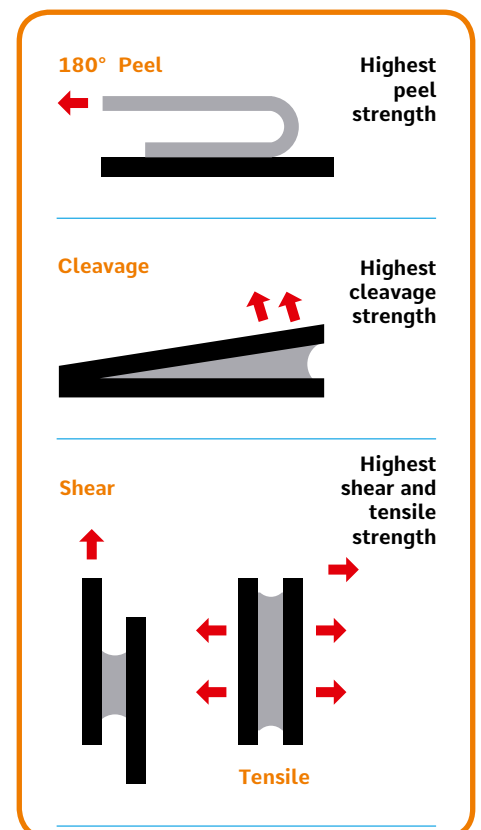
Reforac has more than 25 years specialized experience in the development, production and marketing of industrial adhesives, coatings, sealants and tapes all of a quality that meets the highest market standards. We work with leading institutes, technically skilled partners and certified professional users who are leading specialists in the field of assembly and sealing in construction and in the manufacturing industry. Reforac is a

market leader in South America and has R&D and manufacturing facilities in the Netherlands and Europe. Sales and support for the distribution centres in South Africa, South America, the Middle East, Europe and Australia is provided from the Netherlands.

PUT IT TO THE TEST

Reforac UPPER BOND specialists are always at hand with free advice to develop customised solutions and help you improve your production process.

As a customer, you wouldn't want to risk something going wrong in production. In specific situations (for instance frequent exposure to weather, water,



180° peel strength, in accordance with ASTM D 3330. Dynamic shear, in accordance with ASTM D 1002. Tensile strength, in accordance with ASTM D 897.

Highest peel strength - Highest splitting resistance - Highest shear strength

vibrations, earthquakes and explosions), Reforac therefore can provide test facilities and the option to arrange certification beforehand at recognised certification institutes (for instance TNO, IFT Rozenheim).

DELIVERY PROGRAMME

Reforac tapes come in various versions and are developed for general and specific applications.

The tapes can be supplied either in rolls or die-cut in the shape you wish. Reforac UPPER BOND stands out for its rapid order processing and short delivery times.

A SAMPLE CARD WITH EXAMPLES OF EVERY AVAILABLE TAPE, A TECHNICAL GUIDE AND SAMPLES ARE AVAILABLE ON REQUEST.



REFORAC 5110W WITH A RED PE FILM LINER USED IN THE CONSTRUCTION OF BUS ROOFS BY A MAJOR EUROPEAN MANUFACTURER



REFORAC IS SUPPLIED IN ROLLS. ALSO AVAILABLE DIE-CUTS. ASK FOR OUR CUSTOMISED SOLUTIONS.



DIE-CUT MODELS

REFORAC

Ready for any challenge

FOR SAMPLES:

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Average values are shown, unless otherwise specified. All tapes in our series need to be thoroughly tested on the surface of the specific application they are suited to. Reforac UPPER BOND is not responsible for product damage, unless the entire test cycle was completed. Client decides on the suitability of the tapes for the intended application.