

The Permabond Story...

Permabond's history of developing and manufacturing engineering adhesives spans four decades and three continents. Today, Permabond Engineering Adhesives Ltd (Europe & Asia) and Permabond LLC (Americas) provide technological solutions to engineers all over the world, with offices and facilities in America, Asia and Europe, backed by a high-tech ISO 9001:2000 certified production plant in Europe.



Products are designed and formulated by a team of highly qualified chemists and manufactured with state-of-the-art equipment. Permabond's laboratory team is well experienced in making custom formulations for specific and unique application requirements, as well as developing cutting-edge adhesive technologies for the market.

Permabond's first moments started in the UK, early in the 1960s. For years, manufacturers had no choice but to rely on mechanical means of locking nuts and bolts. The high rate of failure due to equipment vibrations required a more reliable means of locking fasteners on equipment and finished goods.

Chemists at Borden Chemicals (UK) seized this opportunity to develop a special anaerobic adhesive sealant that cured to a solid plastic when used between metal surfaces in the absence of oxygen. As predicted, these adhesives were well-received by the manufacturing sector and business expanded rapidly.

Avdel Ltd spotted this growth and quickly moved to purchase this business from Borden Chemical. As the business continued to grow, they moved to a larger facility in Woodside Road, Eastleigh. The market for adhesives and sealants that could meet the engineering needs of industry was apparent, even at this early date. Avdel invested heavily in Research & Development creating a number of anaerobic products to seal threaded pipes and fittings, retain bearings and press-fit parts and form in-place gaskets.

Meanwhile, in Florida, United States, three men in the jewellery distribution business 'accidentally' discovered cyanoacrylate adhesive and its ability to bond pearls into jewellery. They formed a company called Pearl Chemical and sold cyanoacrylate adhesive for this purpose. One of the three owners, came up with the idea to suspend a farm tractor from a crane, held by nothing except a drop of cyanoacrylate! The picture was used on some of the earliest cyanoacrylate packaging.



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National Starch & Chemical had been looking to enter the adhesives market to compete against Loctite. So it seized the opportunity to purchase the Pearl Chemical cyanoacrylate business, plus also the anaerobic adhesive business, Avdel.

A packaging plant was established in 1976 in Englewood New Jersey and in 1977 production switched from Florida to Bridgewater (NJ). This involved massive investment in new equipment for producing both anaerobic and cyanoacrylate adhesives.

'Permabond' was the name chosen in 1978 for the consolidated groups of anaerobic and cyanoacrylate adhesives business in the US and UK. With the additional cyanoacrylate technology purchased from Eastman (US), Permabond's was making inroads into not only the jewellery and machinery maintenance industries; but also into automotive, electrical, medical and aerospace markets.

Permabond's development chemists were rapidly making a number of break-through products in cyanoacrylate chemistry with ultra high-speed, metal bonding and low-odour grades. This same era saw the introduction of the first toughened cyanoacrylate, Permabond 737. Another key product innovation was Gaseal®, an anaerobic sealant used to seal leaking gas mains. New adhesive technologies quickly entered the arena - epoxies in 1979, two-part acrylic adhesives in the early 1980s and UV-curable adhesives in 1994.

In 1996, chemical giant ICI took over National Starch & Chemical and its businesses, including Permabond. As is common with corporate giants, a change in executive leadership resulted in a decision to divest itself of the Permabond brand name and several product technologies along with other chemical companies. In 2003, the Permabond business was purchased by the Grossi family, involved in the Structural Adhesives Technology since the early 1970s. The new acquisition added extra value to Permabond in terms of investment, technology and manufacturing capacity, as well as a big injection of fresh enthusiasm from the new management team.



Dr. Attilio Grossi, company President, has been an expert in the adhesives business for over 30 years. He is a highly experienced chemist who spearheads the drive to continually keep Permabond products at the forefront of adhesive technology. Highly trained research and development scientists are based in the US, UK and at the main development facility in Italy. Their passionate focus on innovation has brought more than 30 new products to the Permabond range during an 18-month period.

New developments include new structural acrylics, high-temperature anaerobic and cyanoacrylate adhesives, and new epoxy adhesive hybrids as well as combining epoxy strength and performance with acrylic-type cure speed and toughening technology.



Permabond in the future... The focus is very much a global effort with business plans to expand service through a strong network of worldwide distributor relationships and to continue to provide world-class technical expertise and good service to customers.

Permabond
Engineering Adhesives

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