

Sika Cufadan

The growing demand for greater weight savings, greater noise reduction and improved fire safety has steadily increased the need for specialized consultancy by boat manufacturers.

Sika Cufadan offers simple and no nonsense solutions that provide efficient and effective results. The unique features of **Sika Cufadan's** products are setting new standards for weight reduction, noise reduction, thermal insulation and fire resistance. **Sika Cufadan** provides a complete range of marine deck coverings.

The product range includes:

- ▲ Sound reducing and vibration dampening systems
- ▲ Fire rated systems
- ▲ A-60 approved floating floors and vibration dampening systems
- ▲ Sub-floors for wet areas
- ▲ Lightweight leveling and screeding underlays
- ▲ External PU floors.



Laying the Sika Cufadan S-110

All **Sika Cufadan's** products are wheel-mark approved according to EC Directive 96/98/EC on marine equipment and also approved by major authorities and leading classification societies in compliance with the IMO rules. The **Sika Cufadan** range also has approvals from the US Coast Guard.

Image Marine has been one of the first ferry construction companies to take advantage of the **Sika Cufadan** range in Australia. Image Marine is one of Australia's most respected builders of high quality aluminium vessels and has delivered in excess of 150 custom-built vessels throughout Australasia, the Pacific and Africa. Image's design and construction expertise specialises in vessels up to



The latest ferry for Image Marine

40-50 metres in overall length. Image Marine has taken advantage of the **Sika Cufadan S-110** and **Sika Cufadan PK-90 Steel** products on their two latest ferries bound for Hong Kong.

Sika Cufadan S-110 is a lightweight, self-levelling floor underlay based on a flexible cementitious based compound. The product is extremely easy to apply, offering advantages in weight, faster drying times, cost savings and improved occupational health and safety issues when applying the product in large areas. The average thickness used is around 3 to 5mm depending on the deck, but can be applied in thicknesses up to 10mm.

Sika Cufadan PK-90 Steel is a multi layer deck and wall covering system developed to fulfill the demand for an optimum sound reducing construction with low build height. It can be used in combination with **Sika Cufadan** flooring products, however, its main advantage is when it is used in vertical applications for sound dampening requirements. Applications include accommodation areas on decks and bulkheads engulfing noisy areas with machinery generating structure borne noise, like engine rooms, thruster rooms, generator rooms, etc.



The final finish inside the ferry

Sika at Work

Sika®

Rendezvous Hotel



Before Sikaplan

The Rendezvous Observation City in Scarborough is one of Perth's most sought after hotels.

After a number of years in service, the existing roof membrane began to deteriorate, requiring a new waterproofing system. Following in the footsteps of a successful project at the Hilton Hotel in Perth, Monodelphous Engineering was contracted to install the **Sikaplan-15G** PVC sheet membrane to the flat roofs over a number of stages. The **Sikaplan** membrane system gives the hotel a high quality and durable waterproof membrane, designed to withstand the harsh conditions exhibited along the west coast.



And After

Beenyup Waste Water

The Beenyup Waste Water plant in Perth required a major repair system that was prepared by GHD, and installed by the contractor Structural Systems.



Spraying Sikagard-62

Due to the poor condition of the substrate, **Sika Mono Top-620** fairing coat was used to level out the surface and fill any 'bug holes' before applying **Sikagard-720 EpoCem**. The protective coating **Sikagard-62** was then applied to all pits, tanks and channels in the plant. To ensure the tanks were completely repaired and watertight, **Sikadur-Combiflex** was applied to all the joints.



Beenyup Waste Water Treatment Plant

Perth Urban Rail Development - Nowergup Depot

Nowergup Rail Depot, located 35 km north of the Perth CBD, will service, maintain, clean and stow up to 35 rail car sets.

The main contractor Theiss, instructed Savcor to use **Sikadur-42** epoxy grout for grouting under the rail base plates in the external car wash building and again under the rail base plates adjacent to the internal car cleaning platform.



Nowergup rail line



Applying Sikadur-42



Sikadur-42 close up

The Inner Northern Busway

The Inner Northern Busway (INB) in Brisbane will be 4.7km long linking the CBD with the Royal Brisbane Hospital. The construction includes six tunnels, one viaduct and seven stations. This will eventually connect with the existing Queens Street Bus station, linking it to the earlier constructed South East Busway. Joint Venture partners Clough Engineering and Seymour Whyte Constructions are now well underway with the construction of the INB5 section of the tunnel.

The preliminary earthworks associated with the two tunnels have been completed enabling ground support and the construction of the footings for the pre-cast elliptical panels, which have now been installed. Both tunnels were constructed by cut and cover methods, with the excavation drilled, bolted and grouted with **Sikament 320** plasticiser used in the grout mix. They were then fibrecreted for the structural back fill benches / ground stabilisation.



— Stratacrete and CSR spraying fibrecrete

The back fill benches did pose somewhat of a problem. Albie Loncaric from Stratacrete said "...with **Sika's** shotcrete technology high builds over difficult ground conditions using **Sigunit L50-AF** shotcrete accelerator eliminated the need for the construction of formwork and pumping of concrete. We were able to spray high builds with minimal passes therefore exceeding 400 mm in single passes and filling large voids quickly."

Following this the elliptical pre-cast panels for the tunnel were installed (the 456 panels are 2.0 metres wide and are in two sections which are joined post placement) the HDPE membrane applied, shotcrete lined and the tunnel then backfilled. The picture shown below shows the installation of the elliptical pre-cast panels early in the project.



— Installation of panels

The INB3 section, under the guidance of the Thiess Alliance is also progressing well with the excavation under the Roma Street Rail bridges an engineering challenge. As the excavation advances the areas between the existing piles is shotcreted by Stratacrete using **Sigunit L50-AF** in poor, wet, clay conditions, as well as drilled and bolted for additional ground support. Also included in the mix design for the shotcrete is **Sika Mix** to help with the reduction in pump pressure.



— The Inner Northern Busway construction

Requiring additional support was an insitu headstock, which was strengthened using **Sika CarboDur**. The carbon fibre laminates were adhered to the headstock using the structural epoxy **Sikadur-30** and applied by Total Projects.

Pat Birmingham from Total Projects said that a section of this size could be prepared and finished within 24 hours, much quicker than traditional steel plates, due to the weight of the laminate strips and the absence of lifting equipment.



— The strengthened headstock

Botany SWOOS

The Sewage Water Ocean Outfall System is a major conduit for waste water to be transported and distributed under Sydney's roads.

The section of the sewer tunnel found in Botany under several main arterial roads was found to be in terrible



The finished section of the Botany SWOOS

condition due to decay from years of being subjected to a harsh environment.

The risk of the tunnel collapsing led Sydney Water to commission the reinstatement of the sewer sections.

Metropolitan Restorations were contracted to apply **Sika Gunitite-GP** up to 100mm in some sections to repair the walls and roof of the tunnel sections. Once the sections were re-profiled, **Sikagard-720 EpoCem** was applied as a moisture barrier before the protective coating **Sikagard-62** was sprayed into place.

Over the last 10 years, Sydney Water and Metropolitan Restorations have used Sika repair and protection systems to reinstate Sydney's underground and above ground sewer systems. The durable repair methods have ensured that the old reinforced concrete conduits are maintained and kept in service for many more years to come.

NDC Tunnels

Following a recent inspection, the Telstra communication tunnel network found under the centre of Sydney was found to be in need of restoration work.

The BMP Group were contracted to do the repairs to the brickwork tunnels, which revolved around crack repair and re-profiling. The **Sikadur-52** crack injection resin was utilised for the crack repairs, whilst **Sikadur-31** was the choice for re-profiling.



The NDC Tunnel Archway



The brickwork covered by conduits

The advantage of using such a simple repair system meant efficient application techniques were used. The **Sikadur-52**, being a viscous resin, is ideal for fine cracks, whilst the **Sikadur-32** is excellent for larger cracks or broken out sections. The tunnels were heavily covered with electrical conduits, and the repair system allowed BMP Group to work effectively without having to remove the obstacles.

Australia Post



Sika CarboDur S812 installed

The Australia Post distribution centre at Underwood in Brisbane required a section of their power centre to be strengthened.

The introduction of a new generator meant the current slab design in the power room was unsuitable, and the consultants Tod Group designed **Sika CarboDur S812** Laminates to be applied in the direction to counteract this problem.

Total Projects were contracted to install the system, chosen because of its lightweight and ease of application, thus reducing down times and on site lifting equipment.

The strengthened section is now ready for an increase in load on the existing slab, meaning if the lights go out, the mail will still get through!!

Sika Lastomer

Sika Lastomer is a range of butyl rubber based sealants specially developed for the manufacturing market. Their properties include efficient sealing, extraordinary improvements in acoustics as well as anti-vibration properties. Butyl sealants do not harden by chemical reaction but remain permanently tacky. They can be in the form of bulk products in cartridges and pails or preformed products applied as a tape. Bulk product is applied in bead form by cartridge gun or pump operated equipment in an applied thickness of a few millimetres. Preformed strips of butyl tape are available in a range of sizes and colours and are easily applied by pressing into position by hand after removing the backing foil.

Applications

Sika Lastomer can be used for general seals designed for later disassembly, for example in the assembly of:

- ▲ Caravans, buses, trucks
- ▲ Household Appliances and Equipment
- ▲ Ventilation Equipment

Advantages

Sealed components can be disassembled as required

- ▲ Good adhesion to a wide variety of substrates with no special preparation
- ▲ Outstanding moisture resistance
- ▲ Effective Corrosion protection
- ▲ Speedy and simple application
- ▲ Good Acoustic properties



For use on large transport vehicles



Sika Lastomer-710



For use on household appliances

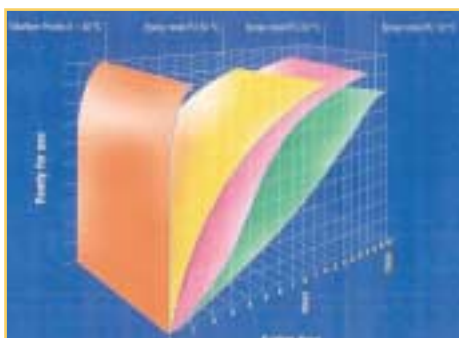
Sikafloor-Pronto

Sikafloor-Pronto is a rapid curing polymethyl methacrylate flooring system designed for use in applications where 'minimum downtime' is required. The product consists of a minimum of 2 components (resin and hardener). The system consists of the prime coat **Sikafloor-13 Pronto**, self-leveling screed **Sikafloor-14 Pronto**, and the top coat **Sikafloor-16 Pronto**.

The **Sikafloor Pronto** system is ideal to be used in supermarkets where downtime is reduced to overnight, and for entry ramps in car parks or underground garages where turnaround time is expected to be very quick.

Advantages of the **Sikafloor Pronto** system include:

- ▲ Very quick curing times (45 minutes at 20°C)
- ▲ Excellent mechanical properties
- ▲ Excellent thermal shock resistance
- ▲ Good chemical resistance
- ▲ Non-brittle



Curing times for Sikafloor-Pronto



Ideal for use in areas where downtime is short

Sika - Spreading the Load

Over the last 28 years, **Sika Australia** has grown from being a sealant and adhesive distributor to a major manufacturer and supplier of construction and industrial materials. Traditionally, manufacture of **Sika's** admixtures, cementitious materials, and epoxy based resins, has been conducted at the Head Office site in Wetherill Park, Sydney. However, in recent times, the load has spread throughout the country with manufacturing facility located at the **Sika** branch offices in Brisbane, Melbourne, and most recently, in Perth. This means reduced lead times and better service for **Sika's** large customer base!



The Eagle Farm site in Brisbane



The resin plant at Wetherill Park



Admixture tanks at Keysborough, Melbourne

15 Years at Sika Australia

Sika Australia values their employees and their contribution to making the company as successful as it is.

This was exemplified recently when three of **Sika's** staff joined long serving storeman Qurban Fahez in reaching a major milestone with the company.

Adrian Chong (Financial Director), Linda Duico (Financial Accountant) and Elizabeth Armacki (Administration and IT Supervisor) all celebrated 15 years of service. They were recently presented with their awards by Director Don Mackay and Sika Asia Pacific Manager, Marcel Smit.



Standing L to R: Linda Duico, Marcel Smit, Elizabeth Armacki, Adrian Chong; Seated: Don Mackay

Congratulations!!

Sika Automotive Stand



The new Automotive Stand

Sika now has a new Automotive stand designed to hold the **Crash Body Repair Systems** available to **Sika Automotive** customers.

Products in the range include **Sikaflex 227**, **Sikaflex 252** and **Sikaflex 260** (the sealant and adhesive range of products). **Sikaflex 529** is the sprayable sealant for seam sealing capable of replicating an OEM finish.

Also available is the **Sikagard** range of product for corrosion and stone chip protection.



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For further information on the enclosed topics, or any other product contact your local Sika Office.