



**StoArmat Miral Render System**  
for Knauf Permarock® construction

# StoArmat Miral Render System for Knauf Permarock® construction

One unique wall system, built with the assured German quality of two brands - Sto a world leader in the manufacturing of high-quality exterior renders and coating systems have partnered with Knauf to provide the perfect reinforcing render for Knauf PERMAROCK®, delivering one complete rendered facade solution.

World renowned StoArmat Render Systems are cement-free, breathable, impact-resistant, highly flexible, with a crack resistance six times higher than that of standard cement-based plasters and finished in a wide variety of different Stolit coloured finishing renders, ensuring maximum longevity with an individual finish for all Knauf PERMAROCK® construction.

Sto and Knauf allow you the flexibility to realise your most demanding designs, whether flat or curved, textured or smooth, white or now with StoColor X-black, for darkly coloured facades.

**Cover: Bunjil Place, Narre Warren  
Architect: Francis-Jones Morehen Thorp**

**Right: Gunyama Park Aquatic Centre  
Architect: Andrew Burges Associates & Grimshaw**



# Sto, an international brand

Selected with confidence worldwide

## Growth from a solid foundation

Establishment in 1835, Sto has undergone an astonishing course of development, from a simple German lime and cement works into one of the leading suppliers of facade insulated systems; a manufacturer of high-quality exterior and interior render systems and coatings worldwide.

Sto encompasses subsidiaries and distribution partners in over 50 countries across the globe. This focused presence provides Sto with a precise understanding of local climatic conditions, architectural styles, building practices, standards and tastes.

As the authorised branch of Sto in Australia, Sto Australia Pty Ltd is committed to the Sto philosophy, "Building with conscience". Today, having developed a full range of Sto Render Systems that have been tested and certified for the market, Sto is recognised as a leader in the rendered facade and cladding market.



**Sto Head Office,  
Research &  
Development,  
Production Centre  
Wiezen, Germany**





### **We always respect nature and look after your interests**

In order to define and implement its ecological targets, Sto has developed a system of environmental management which conforms to international standards. This relates to the entire process chain - from the procurement of raw products, to production, packaging and logistics. Sto makes a clear contribution towards improving and preserving the quality of the environment.



**Parc la Vue, Mission Bay**  
**Developer: Peter Jones**  
**Architect: Brian Cullen**

### **People and architecture; Sto provides the link**

Architecture plays an important role in our lives; lending urban and rural landscapes character, whilst ideally preserving an intact environment. For Sto, "Building with conscience", means enhancing functionality and aesthetics on a sustainable basis and creating an environment in which people feel at one with their surroundings.

# StoArmat benefits

A perfect formula of modern technology

**StoArmat reinforcement render with Stolit finishing renders are manufactured in Germany for guaranteed quality and application consistency. Sto organic, cement-free renders have evolved over 50 years with a successful global history covering over 100 million square metres plus.**

**The added security of a StoArmat 20 Year Warranty with StoService Assurance define StoArmat Render Systems as the industry benchmark.**

## Flexible and crack resistant

The impact of climate conditions and seismic activity can seriously threaten your property's facade. StoArmat reinforcement promises a crack resistance six times higher than that of standard cement-based plaster, durability against mechanical and seismic stresses, plus impact resistance; ensuring maximum system reliability and longevity for your building facade.

## Vapour permeable

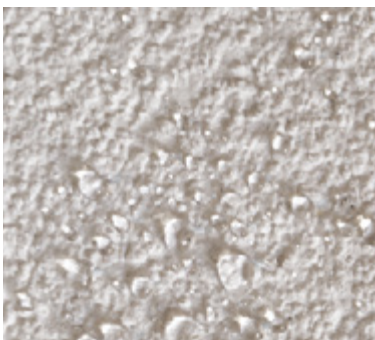
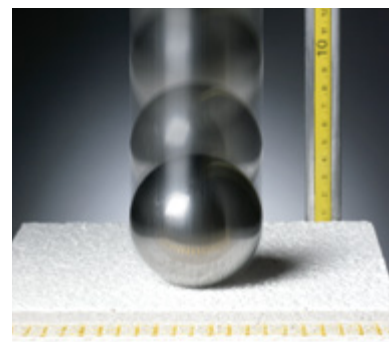
StoArmat with Stolit finishing renders promotes breathability and water vapour permeability, preventing moisture from being trapped between the render and substrate. Water retention behind the cladding is thus avoided, whereas with elastomeric plaster or paint, water can build up behind the coating, eventually leading to blistering.

## Weather resistant

StoArmat with Stolit finishing renders also guard against the weather and changing climate conditions to prevent and protect buildings from water damage. All Sto cement-free renders are polymeric, allowing them to repel water far better than traditional thick-coat plasters.



**A bend test demonstrating extraordinary flexibility and an impact test proving high fracture resistance of StoArmat renders.**



**StoArmat Render System**



**Blistered coating**

Water vapour molecules pass through Sto renders and coatings while still promoting maximum weather tight properties. Elastomeric plasters or paints can lead to facade blistering and distortion as water vapour molecules become trapped.



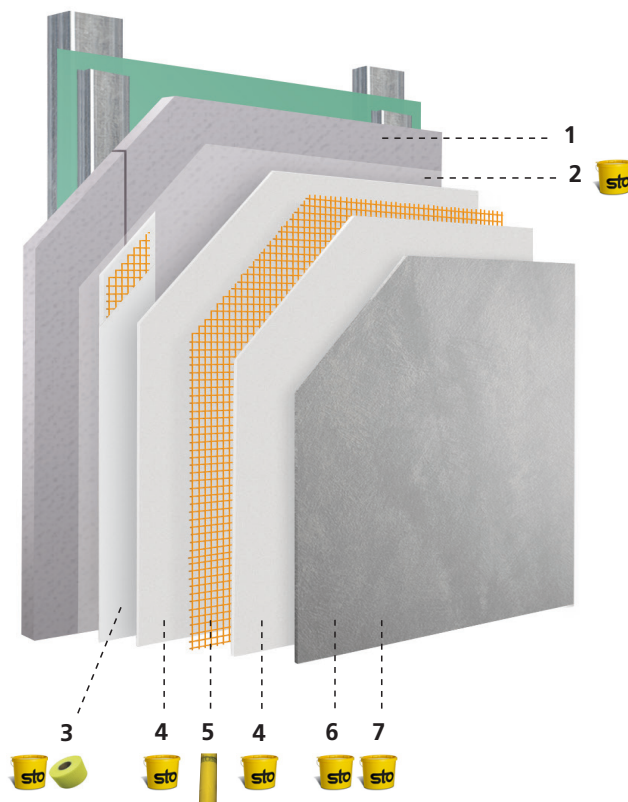
**A cost-effective approach, providing the latest technology with an innovative edge, creating systems that promise longevity and investment value from a recognised leader - Sto.**

### **StoArmat Render Systems with Knauf PERMAROCK® Wall Systems**

Before the system can be applied, the PERMAROCK® cement board surfaces are sealed and all joints flushed using Sto RFP embedded with Sto Jointing mesh for reinforcement.

Application is followed by additional reinforcement of StoArmat render and glass fibre mesh providing engineered reinforcement to reliably dissipate tensile, seismic and shear stress.

The system is finished with perfectly interlocking components: Stolit fibre-reinforced coloured finishing render plus StoColor; creating a 4mm weather-tight reinforcement system for reliability and protection that surpasses the facade durability requirements.



### **Perfect interaction**

#### **1. Substrate: Knauf PERMAROCK® Wall System**

A versatile, high performance interior and exterior cement board wall system manufactured by Knauf. (Fitted by main-contractor)

#### **2 Sealer: Sto Putzgrund**

Water-based, siloxane-enhanced sealer with water repellent and stability properties.

#### **3 Joint Treatment: Sto RFP / Sto Jointing Mesh**

Easy to install, meeting the highest requirements for crack, stress and alkalinity resistance.

#### **4. Reinforcement Render: StoArmat Render**

An organic, weather resistant, cement-free and breathable, high-impact render, with a crack resistance six times higher than that of standard cement-based plasters.

#### **5. Mesh: Sto Glass Fibre Mesh**

Easy-to-install StoMesh meets the highest requirements for crack, stress and alkalinity resistance.

#### **6. Coloured Finishing Renders: Stolit Renders**

Organically bound, highly weather resistant, strong, hard wearing, impact-resistant, pre-coloured finishing renders.

#### **7. Facade Paint: StoColor**

StoColor coating based on IQ Net Technology for functional facades.

#### **BRANZ EM4:**

StoArmat Render Systems have been evaluated by BRANZ.

# Stolit: Coloured finishing renders

Providing your facade with optimum protection

**Stolit organic finishing renders are manufactured in Germany incorporating the latest technology; certified globally and successfully applied to rendered substrates in every climatic zone for over 50 years.**

The Stolit range provides the perfect combination of properties: durable, strong, hard-wearing, impact-resistant, malleable, weather-resistant, colour-stable and highly resistant to microorganisms. In addition, its vapour permeability allows your building to breathe while still repelling water.

Whichever finishing render is chosen, each one is part of a tested and approved system, providing optimum protection and durability; This makes it indispensable in today's construction industry.

## Benefits at a glance

- Available in the full spectrum of colours.
- Extremely low water absorption.
- Optimum surface adhesion.
- Shock-proof and highly resistant to cracks.
- Exceptional resistance to mechanical stress.
- Outstanding colour stability and product stability process – does not require an equalisation coat.
- Excellent application properties.



**Stolit MP**



**Stolit MP Natural**





All Stolit renders are easy to apply and can be tinted using the StoColor System or matched to the colour of your choice using the Sto Spectrometer.



Stolit K 1.0mm



Stolit K 1.5mm



Stolit K 2.0mm



Stolit K 3.0mm



Stolit renders are polymeric, allowing them to repel water and breathe, providing extra long-term protection superior to traditional, painted plaster systems.



Stolit Milano

# The perfect finish

Facades as individual as you and your project

The StoColor finish, a serviceable coating embodying intelligent technology for a range of surface functions to compliment the architectural structure and design. The StoColor System, with 800 shades or matched to any colour using the Sto Spectrometer, provides a clear framework and systematic approach to colour based on integrated layers, combining texture and colour for aesthetic appeal.

## Tested protection and quality

Sto paints establish easy-to-maintain surfaces and an outer layer of the Sto protection system, fulfilling all-important physical building requirements in terms of serviceability and functionality. StoColor facade paint is based on Sto intelligent technology, inspiring an innovative range of surface functions.



The StoColor System comprises of 800 colours for use in architecture - or can be matched to any colour using the Sto Spectrometer to meet any colour design preference.



Sto has been conducting intensive research in the field of bionics for many years. The result: facade paint with iQ – Intelligent Technology where innovative surface functions provide clear added value.

StoColor X-black	StoColor Lotusan®	StoColor Maxicryl	StoColor Lastic Satin
Strong colours for cool facades. A facade paint with X-black technology for dark-coloured facades.	Dirt runs off with the rain. A tried-and-tested facade paint with patented Lotus-Effect® technology for facades that stay cleaner for longer.	A natural looking, matte acrylate facade dispersion paint with high covering power and colour fastness. Suitable for masonry, brick, precast and all Sto rendered substrates.	Durable elastomeric facade paint that bridges cracks in the underlying substrate, for a waterproof solution.
At a glance: <ul style="list-style-type: none"> <li>• Reflects the near-infrared spectral region of solar energy.</li> <li>• Wide variety of colours and shades, a high level of colour stability.</li> <li>• Especially suited to dark colour shades.</li> <li>• Natural matte finish.</li> </ul>	At a glance: <ul style="list-style-type: none"> <li>• Maximum resistance to atmospheric soiling.</li> <li>• Natural protection against algae and fungal attack.</li> <li>• Full colour selection.</li> <li>• Lotusan® is available with additional film protection.</li> <li>• Natural matte finish.</li> </ul>	At a glance: <ul style="list-style-type: none"> <li>• Excellent hiding power.</li> <li>• Full colour selection.</li> <li>• Easy, simple application.</li> <li>• Natural matte finish.</li> </ul>	At a glance: <ul style="list-style-type: none"> <li>• Elastomeric dispersion paint.</li> <li>• Water-vapour permeable.</li> <li>• Excellent hiding power.</li> <li>• Ideal refurbishment coating.</li> <li>• Good colour selection.</li> <li>• Low-sheen satin finish.</li> </ul>
			

# Well advised

Let yourself be inspired

**Individual customer consultation and project support is the basis of a successful business relationship at Sto. Whether on the telephone, in the sales centre or on the construction site – the Sto team will be pleased to provide you with advice, assistance and creative ideas.**

## **Sto customer service**

Service at Sto goes far beyond the development and sale of high-quality products. Ultimately, any product is only as good as its application. This is why Sto places great emphasis on service and consultation. The Sto team are here for their customers, providing comprehensive information and tips on the practical use of new products and relaying detailed knowledge from the Sto technical department.

## **Smart and sustainable**

Sto's impact on performance is big, but the footprint on the environment is small. All Sto products are vapour permeable, easy to apply, safe and non-toxic with low VOCs. Sto incorporates sustainable practices throughout its operations, earning ISO 9001 for quality assurance and 14001 certification for their environmental management system. Many Sto products help reduce the environmental impact of construction by providing insulation, reducing maintenance requirements and extending the life cycle of building facades.

**For contact details of your nearest Consultant, please see the reverse side of this brochure.**



BRANZ Appraised



QUALITY ASSURED



EN ISO 14001

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