

Silanes

Quality Solutions for protective coating applications



Hydro Technology + innovation

Introducing **Silanes** The Consol Range of Hydrophobic Coatings

Building Materials for New Dimensions

Reinforced concrete is today's main building material.



Modern road and bridge construction would be inconceivable without concrete, as would skyscrapers and industrial buildings. Bigger, higher, wider – the global construction boom constantly sets new challenges for materials and technology, as the size and number of buildings increase.

Concrete will remain the No.1 building material in the future.

Despite concrete's durability, serious damage can still occur as a result of attack by environmental contaminants. The main cause of concrete degradation is corrosion to the steel reinforcement due to ingress of water borne salts particularly chloride ions

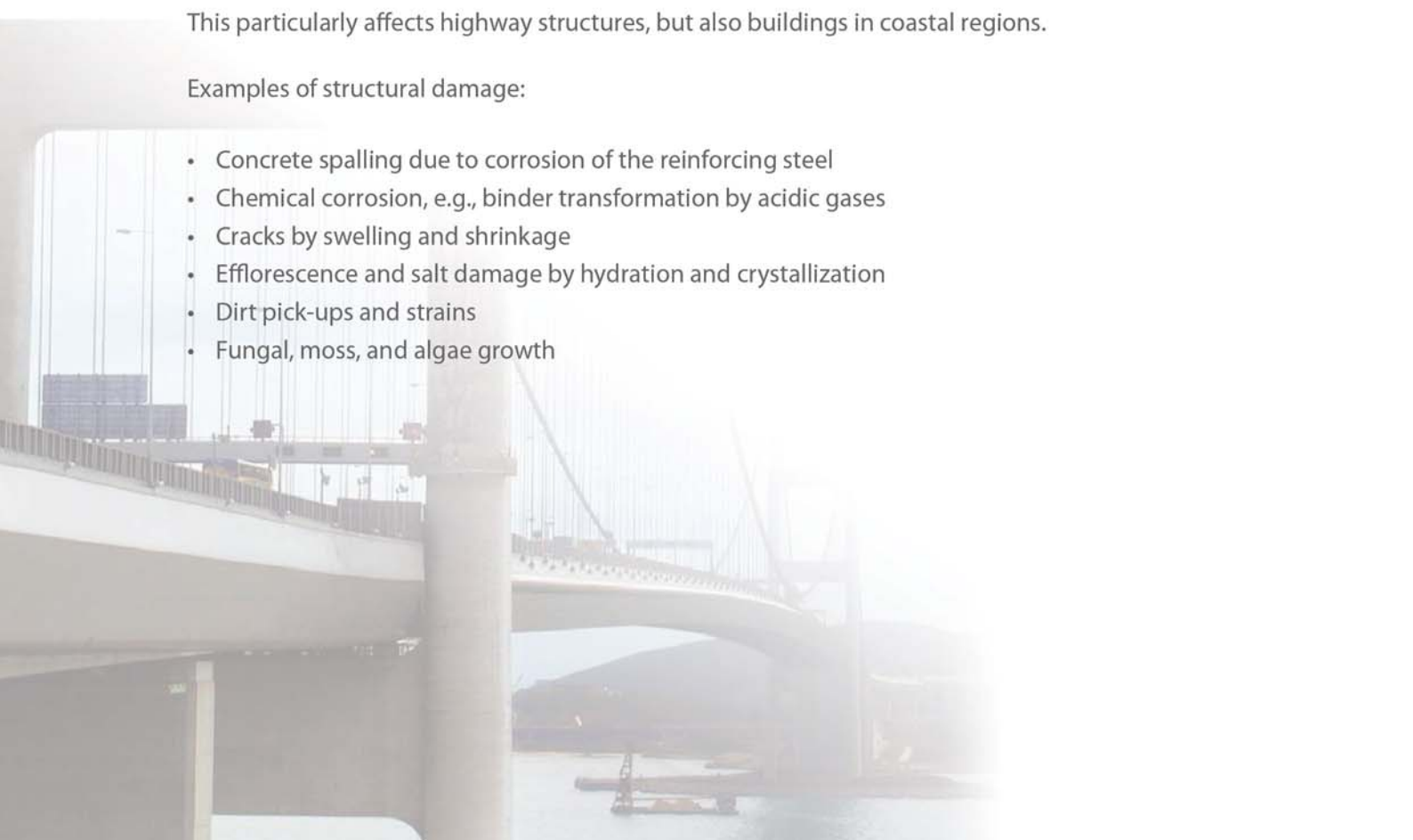
Concrete Damage Involves Moisture - Chlorides Spoil Balance

Fresh concrete is highly alkaline, which provides a passivating layer to the reinforcement steel. Waterborne salts are transported via sea water or by airborne particles onto the concrete surface and are absorbed by the concrete, causing the steel passivating layer to dissolve and corrosion of the reinforcing steel to commence.

This particularly affects highway structures, but also buildings in coastal regions.

Examples of structural damage:

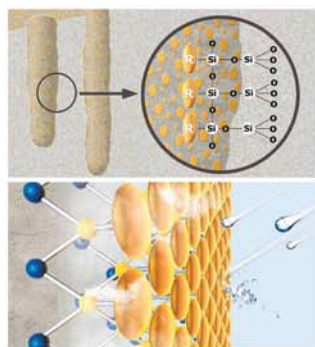
- Concrete spalling due to corrosion of the reinforcing steel
- Chemical corrosion, e.g., binder transformation by acidic gases
- Cracks by swelling and shrinkage
- Efflorescence and salt damage by hydration and crystallization
- Dirt pick-ups and strains
- Fungal, moss, and algae growth



Concrete Penetrates for the Protection of Concrete and Masonry Structures

Hydrophobic Penetrates Provide Long Term Protection

Much of the damage caused by moisture can be prevented, or at least reduced by means of hydrophobic impregnation. Modern Water Repellents achieve:



- Drastic reduction in water uptake
- Chloride barrier and thus protection against reinforcement corrosion
- Retention of high water-vapour permeability
- Extensive penetration
- High UV resistance
- Adequate resistance to alkalis
- Environmentally friendly
- Reduces algae and fungal growth

Concrete Needs Protection - Protect rather than Repair

Only effective preventive measures such as hydrophobic impregnation provide reliable protection for concrete structures. To this end, Hydrotech has developed environmentally compatible impregnating agents and highly effective techniques with the aim to preserve the value of old and new buildings and protect them against weathering and structural damage.

Providing adequate protection to a structure via application of surface penetrates prevents costly remedial measures.

Optimum Silane Efficiency - Consol's Hydrophobic Penetrates

Today's scientific findings confirm silane's excellent and long-lasting effectiveness as a concrete water repellent. Consol's range of Hydrophobic Impregnating Silanes and Silane/Siloxanes cover an extensive range of applications, from preservation of historic buildings to concrete protection. Ongoing product development ensures that products are continually adapted to meet market requirements.

Consol SC80

- Certified to EN 1504-2
- Water-repellent cream
- Aqueous
- Solvent-free
- Silane-based
- For concrete and reinforced concrete
- Use undiluted

Consol WBC

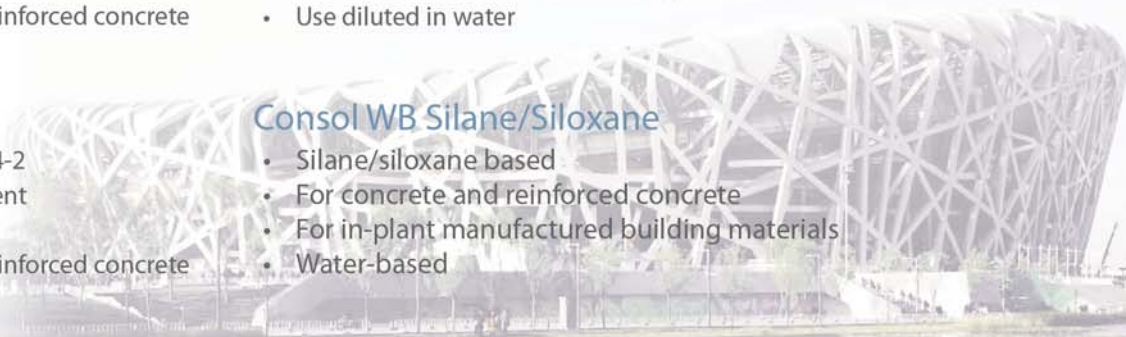
- Certified to EN 1504-2
- Silicone microemulsion concentrate
- Silane/siloxane based
- For concrete and reinforced concrete
- For in-plant manufactured building materials
- Use diluted in water

Consol LS100

- Certified to EN 1504-2
- Liquid water repellent
- Monomeric silane
- For concrete and reinforced concrete
- Use undiluted

Consol WB Silane/Siloxane

- Silane/siloxane based
- For concrete and reinforced concrete
- For in-plant manufactured building materials
- Water-based



Systems marketed by Hydrotech Waterproofing Solutions

ConSol
Environmentally friendly solutions

we help facades!
www.silicone-resin-emulsion-paints.com
AN INITIATIVE OF WACKER SILICONES

www.sstep.com

SPI
Leading the Polysare Evolution



Hydrotech
WATERPROOFING SOLUTIONS

HYDROTECH ASIA LIMITED
Tel: +852 2865 6600
Fax: + 852 2865 6606


HYDROTECH CHINA LIMITED
Tel: +86 10 6878 5181
Fax: +86 10 6878 5183

HYDROTECH EUROPE PLC
Tel: +44 1908 675 244
Fax: +44 1908 397 513

HYDROTECH R&D LIMITED
Tel: +47 97466505
Fax: +47 69294330

www.hydro-usl.com

For all assistance, please contact enquiries@hydro-usl.com

Hydrotech Waterproofing Solutions is a Member of Hydrotech International  group of companies

