MasterSeal 7000 CR
360° Protection for Extreme Conditions
MasterSeal 7000 CR
The Solution for Extreme Challenges

With its unique combination of application and performance properties, MasterSeal 7000 CR is the right solution for waterproofing and protecting wastewater treatment concrete structures and sewers.

Performance

MasterSeal 7000 CR’s high resistance to abrasion and biogenic sulfuric acid corrosion are ideal to withstand the severe conditions that occur in pretreatment and aeration tanks, digesters, or sewers. Its dynamic and static crack-bridging abilities protect concrete from cracks thus prolonging the structure’s life cycle.

MasterSeal 7000 CR fully bonds to:

- Steel
- Concrete (with primer MasterSeal P 770)

MasterSeal 7000 CR is suitable for:

- Horizontal, vertical and overhead application
- In- and outdoor application

The two MasterSeal 7000 CR colors – red and grey – allow safe application even in environments with poor visibility.
The easy application of MasterSeal 7000 CR by spray or roller, as well as its compatibility with damp substrates, suit the conditions of wastewater facilities particularly well. Downtime – which is always critical when stopping a wastewater process – is also reduced because of its fast curing properties that allow contact with water only 24 hours after application at 20 °C.

*“Specific chemical resistance” refers here to the chemical resistance to BSA and also organic acids.
Xoltec – a New Dimension in Durability

Our new and unique technology for durable solutions was developed to solve the problems of challenging technical environments.

Xoltec is an innovative and smart way of combining complementary chemistries. When the material is mixed on site, a cross-linked interpenetrating network (XPN) is formed, enhancing the overall material properties.

Xoltec can be designed in a wide variety of compositions to achieve unique characteristics. These can provide seemingly contradictory properties, such as attractive aesthetics and excellent abrasion or chemical resistance combined with effective crack-bridging.

By controlling the cross-linking density, the properties of Xoltec can be adjusted to suit the product performance required. For example, a formulation of materials with varying degrees of toughness and flexibility can be created.

Xoltec is very low in volatile organic components (VOC) and is quick and easy to apply with both spray and hand application equipment, depending on the requirements. It cures rapidly, even at low temperatures thus reducing application time and enabling fast return to service with minimal downtime.

The technology is insensitive to moisture and tolerates a wide variety of site conditions, greatly expanding the application window while reducing the potential for delays and failures.

Long maintenance cycles and lower life cycle costs significantly reduce the total cost of ownership. Xoltec’s extreme versatility and capacity to formulate a wide variety of solutions for specific requirements create a new dimension in material technology for the construction industry.

Master Builders Solutions from BASF

The Master Builders Solutions brand brings all of BASF’s expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry. The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges.

We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

Our comprehensive portfolio
- Concrete admixtures
- Cement additives
- Chemical solutions for underground construction
- Waterproofing solutions
- Sealants
- Concrete repair and protection solutions
- Performance grouts
- Performance flooring solutions

Fields of application:

- Urban and industrial wastewater treatment in both in- and outflow areas
- Secondary containment in industrial plants
- Biogas plants
- Sewage effluent pipes
MasterSeal 7000 CR
360° Protection for Extreme Conditions

MasterSeal 7000 CR is the waterproofing and concrete protection system with a unique combination of application and performance properties that meet the challenges of aggressive wastewater environments. The performance-proven MasterSeal 7000 CR system significantly extends the life cycle of concrete structures.

**Product benefits at a glance:**

- **Specific chemical resistance**, including high concentrations of biogenic sulfuric acid*
- **Excellent curing properties**, which reduce downtime
- **Fast and easy application by rolling or spray at temperatures from 5°C to 35°C**
- **Crack-bridging** for gaps of up to 0.7 mm
- **Proven durability**
- **Maximum moisture tolerance**, including application on humid substrates

*“Specific chemical resistance” refers here to the chemical resistance to BSA and also organic acids.

Challenges in Wastewater Treatment: Dealing with Aggressive Environments

The concrete infrastructure of wastewater treatment systems is subject to complex physical and chemical corrosion processes.

**Biogenic sulfuric acid corrosion can lead to structural concrete damage**

Biogenic sulfuric acid (BSA) corrosion is caused by bacteria from the genus Thiobacillus, which metabolizes hydrogen sulfide (H2S) and liberates sulfuric acid.

H2S is generated in wastewater systems where sulfur compounds are broken down as part of the general microbiological degradation process by anaerobic bacteria. Accumulation of H2S in the headspace promotes Thiobacillus colonization. Metabolization of H2S by Thiobacillus deposits sulfuric acid directly onto the concrete or iron surface being colonized. Chemical attack then takes place very quickly, deteriorating the concrete surface.

In addition to BSA corrosion in the headspace, chemical attack is also caused by the wastewater itself, either from the organic acids generated as oil and fat are broken down or from other contaminants.

The illustration above represents the different reactions involved in the process of biogenic sulfuric acid corrosion.

**Durable for a minimum of five years – proven under real conditions**

MasterSeal 7000 CR has been tested at the Fraunhofer Institute under conditions that simulate those of a real sewer during 5 years. The results of the test show no significant changes on the properties of MasterSeal 7000 CR.
Master Builders Solutions from BASF for the Construction Industry

MasterAir
Complete solutions for air-entrained concrete

MasterBrace
Solutions for concrete strengthening

MasterCast
Solutions for the manufactured concrete product industry

MasterGem
Solutions for cement manufacture

MasterEase
Low viscosity for high-performance concrete

MasterEmaco
Solutions for concrete repair

MasterFinish
Solutions for formwork treatment and surface improvement

MasterFlow
Solutions for precision grouting

MasterFiber
Comprehensive solutions for fiber-reinforced concrete

MasterGlenium
Solutions for high-performance concrete

MasterInject
Solutions for concrete injection

MasterKure
Solutions for concrete curing

MasterLife
Solutions for enhanced durability

MasterMatrix
Advanced rheology control for concrete

MasterPel
Solutions for water tight concrete

MasterPolyheed
Solutions for mid-range concrete

MasterPozzolith
Solutions for water-reduced concrete

MasterProtect
Solutions for concrete protection

MasterRheobuild
Solutions for high-strength concrete

MasterRoc
Solutions for underground construction

MasterSeal
Solutions for waterproofing and sealing

MasterSet
Solutions for set control

MasterSun
Solutions for sand and gravel in concrete

MasterSure
Solutions for extraordinary workability retention

MasterTop
Solutions for industrial and commercial floors

Master X-Seed
Advanced accelerator solutions for concrete

Ucrete
Flooring solutions for harsh environments

Discover more about MasterSeal 7000 CR
www.masterseal-7000cr.basf.com

Contact us:
Australia +61 2 88 11 4200
India + 91 22 6712 7600
Indonesia – 62 21 2388 6000
China + 86 21 2039 3848
Singapore + 65 6881 6786
Japan + 81 3 3796 9710
Malaysia + 60 3 5628 3888

For countries not listed, please contact our regional office at
Email: construction-asia@basf.com
Telephone: +65 6881 6786
www.master-builders-solutions.asiapacific@basf.com

The data contained in this publication are based on our current knowledge and experience. They do not constitute the agreed contractual quality of the product and, in view of the many factors that may affect processing and application of our products, do not relieve processors from carrying out their own investigations and tests. The agreed contractual quality of the product at the time of transfer of risk is based solely on the data in the specification data sheet. Any descriptions, drawings, photographs, data, proportions, weights, etc. given in this publication may change without prior information. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed (08/2013).
® = registered trademark of BASF group in many countries