

Description

WP SDW 7 is a chemically modified silicate densifier and waterproofing solution designed to penetrate deep into concrete substrates. Its biowetting formulation lowers surface tension so the product wets out fast and penetrates further than standard silicate sealers, migrating through the concrete's capillary network to reach fine pores that untreated products cannot.

It reacts with free lime (calcium hydroxide) and moisture in the concrete to form an insoluble calcium silicate gel within the pores, capillaries and micro-cracks. This gel permanently densifies the concrete matrix, blocks the pathways used by water and waterborne salts, and seals static cracks up to 2.0 mm wide. Because the reaction happens below the surface rather than forming a film, the concrete keeps its natural texture and stays fully trafficable, there's no risk of the bubbling, peeling or blistering you get with film-forming coatings.

The gel stays active for the life of the structure. If a hairline crack opens up later, moisture reaching it triggers the same reaction and reseals it no reapplication needed.

Benefits

- Biowetting formulation for fast, even wetting and deeper penetration.
- Water-based, non-toxic, low-odour.
- Seals static concrete cracks up to 2.0 mm wide.
- Self-healing reseals future hairline cracks on contact with moisture, no reapplication needed.
- Reduces chloride diffusion coefficient by up to 89%, protecting reinforcing steel.
- Reduces water permeability by up to 70%.
- Fully trafficable immediately after the first water-cure cycle no site downtime.
- No film to bubble, peel or blister concrete keeps its natural surface texture and grip.
- Resists heavy mechanical wear, abrasion and vehicle traffic.

General Application

- Infrastructure & asset protection: multi-level car parks, road and rail bridge decks, airport runways, taxiways and aprons.
- Civil & marine structures: wharf decks, concrete piers, splash-zone infrastructure, marine retaining walls.
- Commercial building envelopes: exposed concrete rooftops, podium decks, facades, pre-cast panels.
- Water management: water-retaining structures, containment tanks, storm channels, reservoirs.
- Internal wet areas: under-tile waterproofing for commercial shower recesses and non-glazed tiled zones.

Application Guidelines

Surface Preparation

Concrete must be clean, structurally sound, free of dust, and at least 28 days old. Strip off all curing compounds, form-release agents, laitance or old coatings that would block penetration. Where there's segregation, honeycombing or deep voids, chip out to sound concrete, pre-treat with WP SDW 7, and make good with

an approved repair mortar before full application. Heavily carbonated or older concrete may need a calcium-reinstating pre-treatment first. Don't apply below +2°C or above +40°C.

Application

Flood all visible static cracks first, making sure they're completely filled. Then treat the general area with low-pressure spray, roller or brush at 4–6 m² per litre. Once touch-dry (2–6 hours depending on wind and temperature), flood-spray the whole area with clean water if it's still wet at the 6-hour mark, water it anyway., repeat the water spray 24 hours later, and again after a further 24 hours. After the final water cure, block the drains and pond the area for at least 12 hours to check it's water-tight.

Coverage & Trial Testing

Normal coverage averages 1 litre per 5 m², but this depends heavily on substrate porosity. For cracked areas, allow an extra 1 litre per 3 linear metres. Run a 1–2 m² trial on the actual project substrate before full application to confirm penetration depth and coverage rate.

Handling Precautions

Mask off nearby glass, aluminum, timber and painted surfaces before spraying. If there's accidental contact, flush immediately with clean water before it bonds. Don't apply to saturated substrates or during rain.

Mix Design Compatibility

Works best on Type GP or slag-blend concrete. Type C fly ash mixes are fine up to 30% of total cementitious content. Type F fly ash concrete is not compatible.

Curing Compounds

Water-cured substrates are best. Aqueous acrylic curing agents that break down within 28 days are also fine. Chlorinated rubber coatings, hydrocarbon resins and wax emulsions must be ground or blasted off first to let the product penetrate.

Construction & Pour Joints

Form cold or construction joints with a vertical stop board. Cast in a hydrophilic waterstop or an injection tube system such as Galaxie Reinjekt 2 at the joint. If there's no waterstop, grind out the joint and pack it with an approved non-shrink grout, or seal with an elastomeric joint compound where movement is expected.

Upturns, Kickers & Penetrations

Pour kickers monolithically with the slab where possible, or isolate the cold joint with an embedded hydrophilic waterstop. Detail all pipe penetrations, floor drains and inlets with a hydrophilic waterstop compound extending at least 100 mm around the entry point.

Control Joints

Saw-cut to one-quarter of the slab thickness before the concrete starts shrinking, and fill with a high-movement elastomeric joint sealant.

Large or Stubborn Cracks

Dam the area and flood the crack repeatedly with product. For wider, non-moving cracks, a cementitious slurry at a 5:1 water-to-cement ratio can be injected or swept in. For dynamic or highly active cracks, talk to your technical representative about an engineered solution.

Good concrete practice must be followed such as adequate curing, compaction and vibration.



Technical Data

WP SDW 7	
Appearance	Colourless liquid
Solids Content	35-40%
Density	1.3-1.35
Flash point	N/A water based
Boiling Point	101°C

All technical data stated herein is based on tests carried out under laboratory conditions at 25°C

Limitations

- Do not apply to water-saturated substrates or during active rainfall.
- Do not apply below +2°C or above +40°C (ambient or substrate).
- A penetrating solution, not a film, provides no bridging over active, dynamic or moving cracks.
- Not suitable for sealing structural expansion joints or construction pour joints.
- Not suitable for terracotta or glass-glazed tiled surfaces.
- Compatible with Type GP, slag-blend and Type C fly ash (up to 30%) concrete only not Type F fly ash.

Packaging

WP SDW 7 is supplied in 20 kg and 200kg drums. Packaging size may vary subject to local regulations and requirements.

Storage

WP SDW 7 should be stored at room temperature (min 10°C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 1 year can be expected.

Health & Safety

WP SDW 7 should only be used as directed. We always recommend that the Safety Data Sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. Please contact Galaxie or your local representative for the current SDS.

