

NIPPOJOINT SWELL-C (formerly known as Nippon Swellable Waterstop)

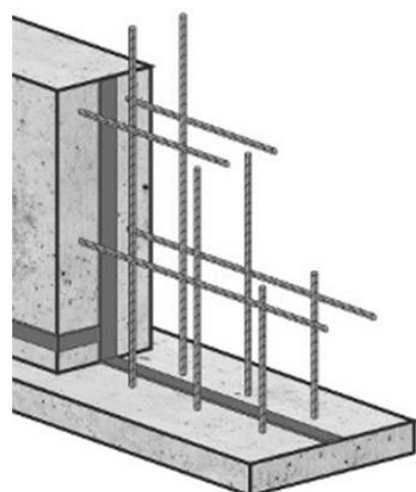
Updated Nov'22


DESCRIPTION

NipponJOINT SWELL-C is high performance hydrophilic chloroprene rubber strips. The swelling action of the **NipponJOINT SWELL-C** is the result of contact between water and hydrophilic groups which are intimate part of the **NipponJOINT SWELL-C** polymeric structure. These hydrophilic groups do not extract out and loss of swelling performance by prolonged wetting.

Expansion of the waterstop creates a positive compression seal against the face of concrete joint and prevents water entry into the structure through the protected joint. In contact with water, hydrophilic **NipponJOINT SWELL-C** react and swell by up to 450 -600% of their original dimensions to form an excellent compression seal.

NipponJOINT SWELLSTICK is an elastomeric water swellable gun paste. It can be used as a swellable adhesive to adhere **NipponJOINT SWELL-C** to concrete. It has the capability to fill undulations and surface holes in the concrete beneath the waterstop and swell into these.

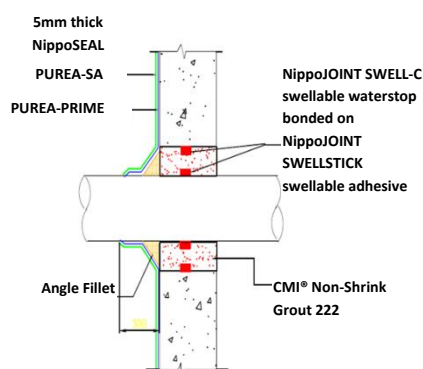

USES

NipponJOINT SWELL-C is applied against existing concrete, it is suitable for applications such as:

- Low movement construction joints
- Retaining wall
- Precast wall panels
- Manholes
- Pipe connections and penetration
- Box culverts
- Old and new concrete joint
- Portable water tank
- Foundations and Basement slabs
- Lift Pits
- Cut and Cover Tunnels

ADVANTAGES

- Sustain effective seal in wet conditions and permanently active
- Simple and easy jointing: No split forming or no welding at site
- Control expansion rate to prevent premature damage to freshly placed concrete during curing
- Retain original shape after repeated contraction
- Swelling properties are unaffected by long term wet/dry cycling
- Non-toxic, suitable for use in human portable water tank or aquatic life
- Works well with ground water, water with high salt and high alkali content (suggest to use salt water grade for saline conditions)
- Available in self-adhesive version



Product Code	Type	Pack Size	Coverage	Colour	Substrate
NipponJOINT SWELL-C (Hydrophilic Chloroprene Swellable Waterstop)					
SWELL-2020C	Chloroprene	20mm x 20mm	10m/roll	Black	Concrete
SWELL-2010C	Chloroprene	20mm x 10mm	10m/roll	Black	Concrete
SWELL-2005C	Chloroprene	20mm x 5mm	15m/roll	Black	Concrete

Typical Technical Data

Color	: Black
Shore A Hardness (ASTM D 2240: 02A)	: 40-50
Tensile strength, N/mm ² (ASTM D638)	: 2.50
Elongation, % (ASTM D638)	: ≥ 450
Expansion volume rate, % (ASTM D471)	: ≥ 300
Hydrostatic Head Resistance, m (Hydraulic Tester)	: 70

**All values given are subject to 5-10% tolerance*

Application Method

NippoJOINT SWELL-C should be positioned by bonding with **NippoJOINT SWELLSTICK**. The waterstop should be installed either into a suitable groove cast in the concrete or directly onto the concrete surface.

Where the substrate is uneven, **NippoJOINT SWELL-C** can be fastened in place using masonry nails at approx. 300mm centres. Care should be taken to ensure that the substrate has sufficient strength to enable a mechanical fixing element to be securely driven without damaging **NippoJOINT SWELL-C**. Alternatively, a groove can be cast into the concrete to facilitate application. On difficult substrates and difficult to access areas such as precast segments, slurry walls, concrete slabs, tunnels and etc. where the waterstop cannot be effectively positioned, **NippoJOINT SWELLSTICK** can be used.

Minimum Concrete Coverage:

For both 2 cage or 1 cage reinforcement, **NippoJOINT SWELL-C** is placed centrally with concrete cover min 75mm for **20mm x 10mm** and min 80mm for **20mm x 20mm**. The minimum concrete thickness is 190mm for **20mm x 10mm** and 200mm for **20mm x 20mm**.

Environmental Conditions During Application

- Ensure well ventilated space for site jointing swellable waterstop.
- Hot weld site jointing of swellable waterstop will result in the liberation of hydrogen chloride mist and vapour. The operation exposure limit of 5ppm can be exceeded in still air confined spaces, therefore suitable respirator PPE or forced ventilation must be provided.

Storage and Transportation

This product should be stored in original packaging in a shaded or cool and adequate ventilation warehouse. The storage temperature should be 15-35°C. This product should be away exposure from rain, UV, sunlight, source of flame and heat. When transporting, care must be taken. Failure to comply with the recommended storage may result in considerable premature deterioration of the product and shorten its shelf life.

Safety Precautions

- Keep it tightly closed in original packed box and upright
- Away from any sharp or protruding edges to avoid puncturing or damaging the waterstop
- Always use protective hand gloves when handling or applying the product.
- Dispose off any waste in accordance with the appropriate Environment Quality Regulations

Note

The above information is given to the best of our knowledge based on laboratory tests and practical experience. However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself. We reserve the right to alter the given without prior notice.