

## CEMSWELL HYDROPHILIC SWELLING RUBBER

Expanding joint sealing profile for the sealing of joints in prefabricated concrete elements

### PRODUCT DESCRIPTION

CEMswell is an expanding joint sealing profile that swells upon contact with water, whilst remaining dimensionally stable.

### APPLICATION AREAS

CEMswell is a new generation expanding rubber sealing material designed for sealing of joints in tunnels and shafts.

Shield-driven tunnels are common features of such construction works as subways, water supply and sewer systems in cities, tunnels, cable lying, etc. Recent trends in shield-driven tunnels have been towards new applications, increase and decrease in section size, and also construction at greater depths or under the sea-bed where measures against high-pressure water are of vital importance. CEMswell is specifically developed to meet these most difficult challenges.



### HOW DOES HYDROPHILIC SWELLING RUBBER CEMSWELL WORK?

On contact with water CEMswell is capable of swelling up to 4 times its own volume and under conditions of confinement will mould itself to the surrounding surfaces producing a water-tight seal. The sealing effect is attained through the developing swelling pressure even if the surrounding surfaces are rough and the joint gaps to be filled are of an uneven size. CEMswell is capable of performing multiple swelling cycles.

### CHARACTERISTICS AND ADVANTAGES

- ☞ CEMswell is an extruded TPE-based alloy made from rubber, hydrophilic resin, polyethylene, silicon and special admixtures
- ☞ Suitable for the use in both vertical and horizontal joints in prefabricated elements
- ☞ CEMswell has been developed for the successful sealing of joints up to 5 bar water pressure.
- ☞ CEMswell is available in various standard sizes but also can be extruded in any user-defined shape and size.
- ☞ In its round profile, CEMswell can be used to successfully seal tie-bolt holes.
- ☞ Swelling volume more than 400%
- ☞ Easy to install
- ☞ Approved for the use in waste water, slurry and animal manure
- ☞ Available in various standard sizes

### APPROVALS

- ☞ General Building Code Test Certificate (abP)
- ☞ Slurry and animal manure resistant



## PRODUCT DATA

	Hydrophilic Swelling Rubber CEMswell	Article-No.
<b>Dimensions/ Packaging</b>	18x7 mm, 6x12 m per box; 3600 m per pallet 23x15 mm, 5x6 m per box; 1500 m per pallet Ø23 mm; 4x5 m per box; 500 m per pallet Available in various other sizes	12-203 12-200 12-504
<b>Storage</b>	Shelf life 3 years when stored in dry conditions, protected from direct sunlight, frost and water	

## TECHNICAL DATA

<b>Working material:</b>	TPE
<b>Colour:</b>	Grey
<b>Shore A:</b>	38
<b>Elongation at break:</b>	490/770%
<b>Tensile strength:</b>	1.1/2.1 MPa
<b>Weight:</b>	18x7 mm:160 g/m 23x15 mm: 400 g/m Ø23: 570 g/m
<b>Specific weight:</b>	1,25 g/cm <sup>3</sup>
<b>Swelling pressure:</b>	0,56 N/mm <sup>2</sup>
<b>Volume of swelling:</b>	More than 400%
<b>Concrete cover:</b>	Min. 8 to 10 cm

## ADDITIONAL INFORMATION

### Surface preparation

The surface onto which CEMswell is to be placed should be clean and flat.

### In Service

Service temperature: -30° C to + 70° C

The above mentioned temperatures constitute the generally valid area in which no additional measures need to be taken during application.

### Environment and health

This product does not represent a hazardous substance within the meaning of the EU Hazardous Substances Regulation. A safety data sheet for transport, placing on the market and use is available on the request.



### **Dangers and Safety**

The essential safety, toxicological, physical and ecological data for the handling of CEMswell can be taken from the product-specific safety data sheets.

### **Data**

All technical data stated in this product data sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

### **Legal advice**

All above mentioned Information concerning BPA products, especially any recommendations and advices relating to the application and use of BPA products are given in good faith based on BPA's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with BPA's recommendations.

In practice, the differences in materials, actual site conditions and other factors outside are such that no warranty nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered.

The user of the product must test the product's suitability for the intended application and purpose before proceeding with the full application of the products. BPA reserves the right to change the properties of its products without notice. Users must always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request. All sales of BPA are subject to our current terms and conditions.

### **Local Restrictions**

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local product data sheet for the exact description of the application fields.

