



## DATWYLER BLACK SWELL

Datwyler Black Swell is based on an EPDM compound with swelling capabilities. It is used in various applications, e.g. as profiles for sealing purposes. For the first time it is possible to combine the excellent properties of the EPDM polymers with swelling material. In doing so, Datwyler was able to achieve advancements in technology with regard to durability and chemical resistance.

### DATWYLER BLACK SWELL MAIN ADVANTAGES:

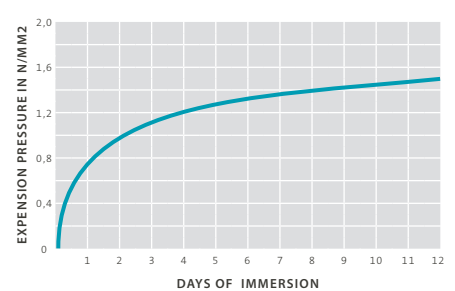
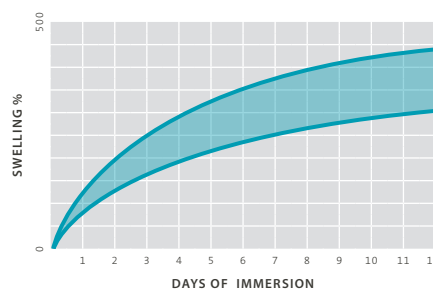
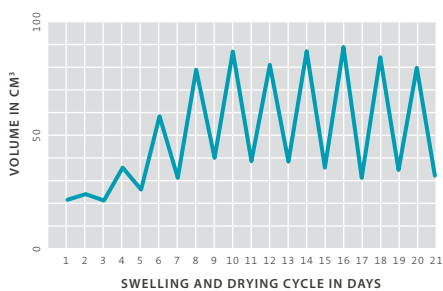
- Reliable swell performance
- Reversible swelling process
- Excellent chemical resistance
- Outstanding ozone resistance
- Outstanding aging resistance in harsh weather conditions
- Good resistance against high temperatures in dry and humid environments
- Good resistance against freezing temperatures
- High resistance against permanent deformation
- High water impermeability
- Good mechanical performance and high elasticity even after artificial ageing
- Good resistance against various chemical products, e.g. organic and inorganic acids, leach, phosphoric acid esters, hydraulic fluids, anti freeze and brines, bleach, biodegradable detergents and cleaners and alcohol
- It is possible to create different geometries, e.g. profiles, strips or molded products. It is also possible to build frames for concrete segments.

### MATERIAL CHARACTERISTICS:

**Datwyler Black Swell** is based on an EPDM (Ethylen-Propylen-Dien-Monomer) compound with hydrophilic nano particles, which are able to contain water in their molecular structure enabling them to swell three dimensionally.

This process depends on the temperature, as well as, on the quality or composition of the water. The created expansion pressure ensures a reliable water sealing performance.

- **Hardness  $60 \pm 5$  Shore<sup>°</sup> A**
- **Tensile Strength  $> 3,0$  N/mm<sup>2</sup>**
- **Elongation  $> 500\%$**
- **Swelling 300–500%**
- **Ozone Resistance – Unit “0” (Values are taken from non swollen material)**

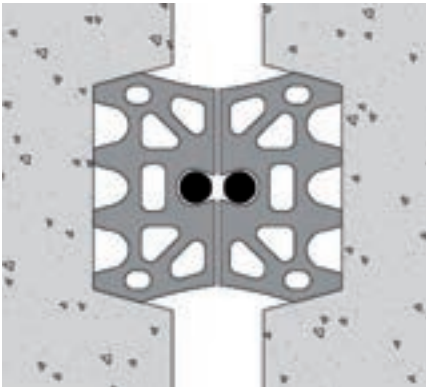


NO MATTER WHAT  
THE FUTURE HOLDS



## APPLICATION:

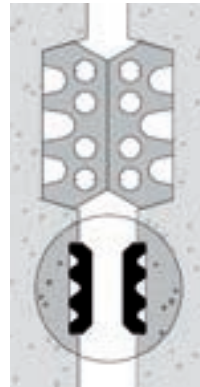
**Datwyler Black Swell** is available in various shapes, e.g. as molded parts or extrusion profiles depending on the application.



– As composite Tunnel Gasket



– As separate seal next to the Tunnel Gasket



– As extrusion profiles in different shapes



– Installation of Datwyler Black Swell into the composite Tunnel Gasket



– Installation of the Datwyler Black Swell Gasket Frame with Datwyler FP-75



– Datwyler Black Swell before and after swelling with molded corner

## DELIVERY:

Individually packaged in poly bags inside of a cardboard box. Available lengths for Strips and extrusion profiles can go up to a maximum of 40 meters.

## STORAGE:

**Datwyler Black Swell** profiles have to be protected against moisture during storage. In case of any contact with moisture, this product should not be installed. It is recommended to wait until the product is dry and back in its original form.

## INSTALLATION:

With adhesive G3000 and G3000Plus by contact gluing method, with paste FP-75 to be applied one-sided or mechanically by using staples or nails.

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