

# OTTOSEAL®

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## S 18

### Technical Data Sheet

identical with Novasil® 18

#### Characteristics

- Neutral curing RTV-1 silicone sealant based on an oxime cross-linking system
- Extremely resistant to continuously wet conditions
- Contains extra fungicide
- High notch resistance
- Resistant to chlorine in the concentration required for swimming pool disinfection
- Non-corrosive
- Good adhesion to different substrates; a primer treatment is needed partly
- UV-resistant
- Excellent weathering and ageing resistance

#### Fields of application

- Special sealant for underwater seals and joints in swimming pools, containers etc.
- **OTTOSEAL® S 18** is not suitable for drinking water tanks. For this purpose we recommend **OTTOSEAL® S 27**
- **OTTOSEAL® S 18** is not suitable for aquaria. For this application we recommend **OTTOSEAL® S 28**
- **OTTOSEAL® S 18** is not suitable for marble and natural stone swimming pools. For this application we recommend **OTTOSEAL® S 70**

## Important information

During vulcanisation small amounts of a neutral splitting product are released. After vulcanisation is completed **OTTOSEAL® S 18** is odourless and physiological indifferent. **OTTOSEAL® S 18** is heavily equipped with fungicides and not affected by the amount of chlorine utilized as swimming pool disinfection and sea water.

To minimize an attack of fungus on the swimming pool sealant **OTTOSEAL® S 18**, OTTO-CHEMIE strongly recommends the following details.

The disinfection of the swimming pool water with chlorine is indispensable. In addition to that, alternative processes may also be used. In order to prevent an attack of fungus effectively, a sufficient chlorine disinfection must be ensured. Alternative processes like UV-radiation or ozonization show insufficient disinfecting effect.

We recommend washing off the vulcanised sealant with clear water in order to remove residues of smoothing agent from the sealant surface. Residues of smoothing agent might cause an attack of fungus.

Water conditions have to be as follows:

Swimming pool: 0.3 - 0.6 mg/litre of free chlorine

Warm water whirlpool: 0.7 - 1.0 mg/litre of free chlorine

The present state of the art allows an amount of up to 1.2 mg/litre of free chlorine.

The pH value of pool water is optimal if the value is regulated to 7.0. Deviations upwards and downwards between 6.5 and 7.6 are allowed in fresh-water. Please note: A very strong smell of chlorine indicates an incorrect pH value of the swimming pool water. The pH value must then be checked and regulated properly.

Regular water circulation is indispensable and must not be interrupted at times. Due to interruptions, partial variable chlorine concentrations may arise and may partially fall below the minimum concentration of 0.3 mg/litre. This drop causes germination of all existing spores and an attack of fungus. In order to ensure proper water circulation, the pool water should run constantly over the overflow edge of the pool.

When using detergents, no acid detergents should be used as such detergents increase the danger of an attack of fungus.

When reconstructing affected silicone joints, the silicone sealant must be removed completely. After removing the silicone the subsurface has to be disinfected with Anti-Mildew spray. Otherwise penetrated fungus spores would grow quite fast through the renewed silicone sealant to the surface.

The required vulcanisation time prolongs with increasing thickness of the silicone. One part silicones must not be used for bonding applications where the silicone is supposed to be spread all over the surface. Such applications require a special design – please contact our technical service department. One-part silicones are not designed to be used in layers of more than 15 mm.

## Features

**OTTOSEAL® S 18** is a ready-to-use, neutral, one part silicone rubber based on an oxime cross-linking system.

## Technical properties

Density:	approx. 1.05 g/cm <sup>3</sup>
Shore-A hardness (DIN 53505):	approx. 20
Tensile elongation (DIN 53504):	approx. 700 %
Modulus at 100 % elongation: (DIN 53 504)	approx. 0.3 N/mm <sup>2</sup>
Movement capability	25%
Temperature resistance:	- 40 °C up to + 180 °C
Tooling temperature	+5°C up to +35°C
Skin-forming time (23°C, 50 % RH):	approx. 6 min.
Shelf life: pail / drum	12 months from the date of manufacture in closed packaging at room temperature
Tensile strength (DIN 53504):	approx. 1.4 N/mm <sup>2</sup>
Viscosity (23 °C):	non-sag, pasty
Curing in 24 hours (23°C 50% RH):	approx. 2 - 3 mm

These data are not intended for preparing specifications. Please contact OTTO – CHEMIE before writing specifications.

## Primer Table

Mineral substrates like mortar, concrete, plaster, tile adhesive etc. in under water application must be primed with OTTO-Primer 1218. OTTO Primer 1218 is also suitable for ceramic tiles.

Aluminium (splashing water)	1216	Concrete (splashing water)	1215 / 1218
Aluminium (permanent water stress)	1216	Concrete (permanent water stress)	1218
Aluminium anodized (splashing water)	1216	Natural stone / marble (splashing water)	OTTOSEAL® S70 + Primer 1216
Aluminium anodized (permanent water stress)	1216	Natural stone / marble (permanent water stress)	OTTOSEAL® S70 + Primer 1218
Ceramic tiles glazed (splashing water)	1215 / 1218	PVC-swimming pool sheets (splashing water)	1101 / 1217
Ceramic tiles glazed (permanent water stress)	1218	PVC-swimming pool sheets (permanent water stress)	1101 / 1217
Ceramic tiles unglazed (splashing water)	1215 / 1218	Polyester / GFK (splashing water)	1217
Ceramic tiles unglazed (permanent water stress)	1218	Polyester / GFK (permanent water stress)	1217
Chrome (splashing water)	1216	Stainless steel (splashing water)	1216
Chrome (permanent water stress)	1216	Stainless steel (permanent water stress)	1216

+ = good adhesion without primer

- = not suitable

R = further inquiry or preliminary tests required

T = Test recommended

## Application information

Please use closed cell PE-Back-up foam rod.  
Provide good ventilation during the **application and vulcanisation of OTTOSEAL® S 18**.

In case of sealing in combination with swimming pool sheets e.g. DLW, Deliofol, Hüls, Trocal etc. a pretreatment with OTTO-Primer 1217 oder OTTO-Cleanprimer 1101 is absolutely necessary: Apply OTTO-Primer 1217 in a thin, regular layer on the swimming pool sheets. Sealant must be applied after OTTO-Primer 1217 has dried up for at least 15 minutes. OTTO-Cleanprimer 1101 can be used like a cleaner.

**OTTOSEAL® S 18** should have cured at least 4 days (preferably 2 weeks) at room temperature before the sealed object can be used for the first time.

However, because conditions and methods of use of our products are beyond our control, customer tests are required to ensure that our products are safe, effective and fully satisfactory for the intended end use.

Please observe the recommended shelf life that is printed onto the packaging.

## Packaging

Unit	Units per box	Units per pallet
Cartridges 310 ml	20	1200

## Colours

C02 – grey	C77 – silkgrey	C01 - white
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All colours are heavily equipped with fungicides

## Safety precautions

Please refer to the material safety data sheet.

## Disposal

Disposal should be made in accordance with federal, state and local regulations.

## Warranty information

All information in this publication is based on our current technical knowledge and experiences. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Otto-Chemie's products are safe, effective and fully satisfactory for the intended end use. Information given in this technical data sheet and explanations of OTTO-CHEMIE in connection with this technical data sheet (e.g. service description, reference to DIN regulations etc.) include in case of doubt no acceptance of a guarantee. Otto-Chemie's sole warranty is that the product will meet the Otto-Chemie sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Otto-Chemie specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability, unless Otto-Chemie provides you with a specific, duly signed endorsement of fitness for use. Otto-Chemie disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent. All mentioned document conditions in this technical data sheet lay down the terms of delivery fully and completely. We reserve the right to alter product constants within the scope of technical progress or new developments. We are pleased to be at your disposal for inquiries, also regarding specific application problems. If the application in which the products are used requires governmental approval or clearance, the user is responsible to obtain such approval. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and if necessary, clarifying the position. In the event of deficiency our terms and conditions are applicable. If our terms and conditions are not with you, we send them to you on request.