

OTTOSEAL®**S 18****Technical Datasheet****Characteristics:**

- Neutral-curing 1-component silicone sealant
- Extremely resistant to continuously wet conditions
- Contains extra fungicide
- High resistance to notches, tension and tearing
- Resistant to chlorine in the concentration required for swimming pool disinfection
- Non-corrosive
- Excellent adhesion on many substrates, partly in combination with primer
- Excellent weathering, ageing and UV-resistance

Fields of application:

- Sealing of swimming pools and -baths as well as elastic jointing on the pool edges

Standards and tests:

- Suitable for applications according to IVD instruction sheet no. 14+17+31 (IVD = German industry association sealants)
- French VOC-emission class A+
- Certified according to GOS

Important information:

Before applying this product the user has to ensure that the materials in the area of contact (solid, liquid and gaseous) are compatible with it and also amongst each other and do not damage or alter (e. g. discolour) each other. As for the materials that will be used at a later stage in the surrounding area of the product the user has to clarify beforehand that the substances of content or evaporations do not lead to an impairment or alteration (e. g. discolouration) of the product. In case of doubt the user should consult the respective manufacturer of the material.

During the curing process of the material reaction products of the crosslinker are released.

Ensure good ventilation during application and curing.

After curing the product is completely odourless, physiologically harmless and unmodified.

The required vulcanization time prolongs with increasing thickness of the silicone layer. One-component silicones must not be used for full-surface bonding applications unless special constructional prerequisites are met. If one-component silicones are to be used for thickness layers of more than 15 mm please contact our technical department beforehand.

We recommend washing off the vulcanised sealant with clear water before flooding the swimmingpool in order to remove residues of smoothing agent from the surface. Residues of smoothing agent might cause implantation and growth of microorganism and an attack of fungus.

The sealant is heavily equipped with fungicides and resistant to salt water and chlorine in the usual amount used as swimming pool disinfection. To minimize an attack of fungus on the sealant, the following indications must be paid attention to: The disinfection of the swimming pool water with chlorine is indispensable. In addition to that, alternative procedures may also be used. In order to prevent an attack of fungus effectively, a sufficient chlorine disinfection must be ensured. Alternative procedures such as UV-radiation or ozonization have no disinfecting effect. This is however essential to prevent an attack of fungus.

Water conditions must 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 current status of technique 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 up and down 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. Please check the pH value and regulate it properly.

Regular water circulation is indispensable. It should always be activated and not be interrupted at any time. Due to interruptions, partial variable chlorine concentrations may occur and may partially fall below the minimum concentration of 0.3 mg/litre. This Falling below the minimum concentration causes germination of all existing spores and an attack of fungus. To ensure proper water circulation, the pool water should run constantly over the overflow edge of the pool.

For cleaning purposes preferably use neutral or alkaline detergents as fungus multiplies quicker in an acidic environment.

Avoid contact with materials which contain bitumen and which release solvents, e. g. butyl, EPDM, neoprene, insulating- and bituminous paint.

Upon restoring of joints contaminated with mould the existing elastic sealant must be removed completely. Before re-jointing, the affected jointing areas are to be treated with OTTO Anti-Mildew Spray to remove possibly existing fungal spores. Otherwise a new mould attack may occur in the joints again, despite the mould protection technology of the sealant. Please observe the Technical Datasheet of OTTO Anti-Mildew Spray.

Technical properties:

Skin-forming time at 23 °C/50 % RAH [minutes]	~ 6
Curing in 24 hours at 23 °C/50 % RAH [mm]	~ 2 - 3
Processing temperature from/to [°C]	+ 5 / + 35
Viscosity at 23 °C	pasty, stable
Density at 23 °C according to ISO 1183-1 [g/cm³]	~ 1,0
Shore-A-hardness according to ISO 868	~ 20
Permissible movement capability [%]	25
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm²]	~ 0,3
Tensile expansion according to ISO 37, S3A [%]	~ 700
Tensile strength according to ISO 37, S3A [N/mm²]	~ 1,4
Temperature resistance from/to [°C]	- 40 / + 180
Shelf life at 23 °C/50 % RAH [months]	12

These data are not suitable for the issue of specifications. Please contact OTTO-CHEMIE before issuing specifications.

Pretreatment:

All adherent surfaces must be clean and any contaminant such as release agents, preserving agents, grease, oil, dust, water, old adhesives or sealants and other substances which could affect adhesion, should be removed. Cleaning of non-porous substrates: Apply OTTO Cleaner T (airing time approx. 1 minute) using a clean, lint-free cotton cloth. Cleaning porous substrates: Clean surfaces with steel-wire brush e. g. or a grinding disk to remove loose particles.

The adherent surfaces have to be clean, free from fat, dry and sustainable.

Primer Table:

The OTTO Primer 1215, 1217 and 1218 are subject to the obligation to inform and to keep records according to the German Regulation of Chemical Interdiction (amongst others prohibition of self service) since 01.11.2005. Please observe the Technical Data Sheets (www.otto-chemie.com).

The demands on elastic sealings and bondings depend on the respective exterior influences. Extreme fluctuations in temperature, tensile or shear forces, repeated contact with water etc. demand high requirements of a bonding. In such cases it is advisable to apply primer according to the recommendations of our technical department (e. g. +/OTTO Primer 1216) in order to achieve a resilient bonding.

Acrylic glass/PMMA (Plexiglas®, etc.)	T
Aluminium	1216
Aluminium anodized	1216
Concrete	1105 / 1218
Concrete (permanent water stress)	1218
Chrome	1216
Stainless steel	1216
Ceramic, glazed (permanent water stress)	1218
Ceramic, unglazed (permanent water stress)	1218
Ceramic, glazed	+ / 1215
Ceramics, unglazed	+ / 1215
Natural stone / marble	OTTOSEAL® S 70 / S 140
Natural stone (marble, granite, etc.) (permanent water stress)	OTTOSEAL® S 70 / S 140
Polycarbonate	T
Polyester	1217

+ = good adherence without primer

- = not suitable

T = Test/pilot test advised

Application information:

OTTOSEAL® S 18 is not suitable for aquaria. For this purpose we recommend OTTOSEAL® S 28.
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 marble or natural stone swimming pools. For this purpose we recommend OTTOSEAL® S 70.

With OTTOSEAL® S 140 we offer a swimming pool silicone with prolonged protection against mildew. For backfilling of joints please use closed cell PE-Back-up foam rod.

The curing time, depending on the thickness of the sealant layer and ambient temperature and atmospheric humidity, is minimum 4 days, preferably 2 weeks, before filling the swimming pool with water.

Due to the many possible influences during and after application, the customer always has to carry out trials first.

Please observe the recommended shelf life which is printed on the packaging.

We recommend to store our products in unopened original packagings dry (< 60 % RAH) at temperatures of +15 °C up to +25 °C. If the products are stored and / or transported at higher temperatures / air humidity for longer periods (some weeks), a diminution of durability or a change of material characteristics may arise.

Packaging:

	310 ml cartridge
grey	S18-04-C02
silk grey	S18-04-C77
white	S18-04-C01
Packaging unit	20
Pieces per pallet	1200

Safety precautions:

Please observe the material safety data sheet.

Disposal:

Information about disposal: Please refer to the material safety data sheet.

Warranty information:

All information in this publication is based on our current technical knowledge and experiences. However, since conditions and methods of use and application of our products are beyond our control, we suggest you to test the product before final 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.) is not to be seen as a warranty. Warranties require a separate written declaration of OTTO – CHEMIE to prove their validity. The characteristics stated in this data sheet define the characteristics of the article broadly and conclusively. Suggestions of use are not to be taken as confirmation of the appropriateness for the recommended intended use. We reserve the right to alter the product adjusting it according to technical progress and new developments. We are at your disposal both for inquiries as well as specific application problems. If a governmental approval or clearance is necessary for the application of our products, the user is responsible for the obtainment of such. Our recommendations do not excuse the user from the obligation to take into consideration the possibility of infringement of third parties' rights and - if necessary – resolving it. For the rest our general terms and conditions apply, in particular regarding a possible liability for defects. You can find our general terms and conditions on our homepage: <http://www.otto-chemie.com>.