

**OTTOSEAL®****S 140**

Technical Datasheet



## 1-component silicone sealant based on oxime, neutral cross-linking, MEKO-free

For indoor and outdoor application

### Characteristic:

- **Highly active fungicide plus innovative OTTO Fungitect® silver technology**  
Double protection against mould
- **Compatible with natural stone**  
Does not cause any migratory staining on natural stone
- **High resistance to notches, tension and tearing**  
Resistant to high mechanical stresses
- **Excellent weathering, ageing and UV-resistance**  
For long-lasting indoor and outdoor applications
- **Stress expansion modulus at 100 % (ISO 37, S3A): 0,4 N/mm<sup>2</sup>**

### Fields of application:

- Special silicone for sealing and jointing in hygiene areas with high stress on the silicone joints, e.g. in wet rooms, in public shower and bathing areas, in swimming pool complexes/leisure centres, in stadiums, gymnasiums, hospitals, thermal baths, spa areas, hotel bathrooms, etc.
- For jointing on ceramic tiles and natural stone in constantly wet areas
- Sealing of swimming pools and -baths as well as elastic jointing on the pool edges
- Well suitable for floor joints

### Standards and tests:

- Tested according to EN 15651 – Part 1: F EXT-INT 25 LM / F EXT-INT CC 20 LM
- Tested according to EN 15651 – Part 3: XS 1
- Tested according to EN 15651 – Part 4: PW INT 12.5 E
- Suitable for applications according to IVD instruction sheet no. 3-1+3-2+14+17+23+27+31+35 (IVD = German industry association sealants)
- Quality seal of the IVD (Industrial association for sealants, registered society), tested by the ift Rosenheim (Institute of window engineering, registered society)
- According to regulation (EG) Nr. 1907/2006 (REACH)
- French VOC-emission class A+
- Declaration in "baubook" Austria
- EMICODE® EC 1 Plus R - very low emission
- Tested fire behaviour in accordance with EN 13501: class E

### Important information:

#### Professional tips for the renovation of joints:

For a professional renovation of joints it is absolutely necessary to remove all of the sealant damaged by mould thoroughly. It is also important to remove any residue from the bottom and the sides of the joint. Having done this the joint has to be treated with an Anti-Mildew Spray to kill off any leftover fungus spores. Only now the joint can be filled again.

If these measures are not carried out accurately, the sealant, even though it contains fungicides, can be infected by mould again shortly after because the spores are still in the joint.

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

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.

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

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

Ensure good ventilation during application and curing.

The sealant thickness in the joints with back-up foam rod OTTOCORD PE-B2 is to be limited to max. 10 mm. If the depth of the joint is too low, a PE foil can be placed in the base of the joint in order to prevent a three-edge bond of the sealant.

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 10 mm please contact our technical department beforehand.

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.

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 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 however be ensured. Alternative processes like UV-radiation or ozonization show insufficient disinfecting effect. As mentioned that is indispensable though 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.

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#### Technical properties:

Skin-forming time at 23 °C/50 % RH [minutes]	~ 10
Curing in 24 hours at 23 °C/50 % RH [mm]	~ 2
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	~ 25
Permissible movement capability [%]	25 (1)
Stress expansion modulus at 100 % according to ISO 37, S3A [N/mm²]	~ 0,4
Tensile expansion according to ISO 37, S3A [%]	~ 600
Tensile strength according to ISO 37, S3A [N/mm²]	~ 1,5
Temperature resistance from/to [°C]	- 40 / + 180
Extrusion rate according to ISO 8394-1 [g/min.]	~ 140 - 180
Shrinkage of volume according to ISO 10563 [%]	< 10
Shelf life at 23 °C/50 % RH for cartridge/foil bag [months]	12 (2)

- 1) Please pay attention to standards and tests
- 2) from date of manufacture

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

**Pretreatment:**

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

**Primer Table:**

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.)	-
Acrylic bathroom surfaces (e. g. bath tubs)	1101
Aluminium	+ / 1216
Aluminium (permanent water stress)	1216
Aluminium anodized	1101 / 1216
Aluminium, anodised (permanent water stress)	1216
Aluminium powder-coated	1101 / T
Concrete	1105 / 1215 / 1218
Concrete (permanent water stress)	1218
Concrete block	1216 / 1218
Lead	T
Stainless steel	1216
Iron	+ / 1216
Epoxid resin coating	+ / 1216
Epoxid resin mortar	+
Glass	+
Wood, painted (solvent systems)	+
Wood, painted (aqueous systems)	+
Wood, varnished (solvent systems)	+
Wood, varnished (aqueous systems)	+
Wood, untreated	+ (1)
Ceramic, glazed	+ / 1216
Ceramic, glazed (permanent water stress)	1216
Ceramics, unglazed	+ / 1218
Ceramic, unglazed (permanent water stress)	1218
Plastic profiles (unplasticized, e. g. Vinnolit)	1227
Copper	+ / 1216 (2)
Melamine formaldehyde resins (e. g. Resopal®)	1216
Brass	1216 (2)
Natural stone / marble	1216
Natural stone (marble, granite, etc.) (permanent water stress)	1216 / 1218 (3)
Polyester	+
Polyester / GFK (permanent water stress)	1217
Polypropylene	-
Cellular concrete	1105 / 1215
Plaster	+ / 1105 / 1215
PVC unplasticized	1227
PVC soft / swimming pool liner	1217
Tinplate	1216
Zinc, galvanised iron	+ / 1216

1) Upon high exposure to water please contact our Technical Department.

2) The reaction of neutral silicone with non-ferrous metals, such as copper, brass, etc. is possible. Upon curing unblocked air admission is necessary.

3) Pre-treat natural stones with little absorption (e.g. granite) with OTTO Primer 1216, and strongly absorbent natural stones (e.g. quartzite) with OTTO Primer 1218 in the underwater area.

+ = good adherence without primer

- = not suitable

T = Test/pilot test advised

#### Application information:

We recommend OTTO Marble Silicone Smoothing Agent (undiluted) for smoothing on marble and natural stones. Excess smoothing agent must be washed off/removed immediately. We advise against the use of conventional smoothing liquids (such as washing-up liquids), since some natural stones are very sensitive and stains/spots might be caused on the surface of the natural stone. With all other substrates OTTO Glättmittel can be used for smoothing too.

Especially with unpolished natural stone surfaces make sure not to spread the sealant beyond the joints, as the sealant is difficult to remove once it enters the pores of the natural stones.

In particular in sensitive, rough and absorbent natural stone surfaces such as sandstone and limestone, we recommend taping off the joint edges in order to keep the sealant from being pressed into the natural stone surface when smoothing. This will cause stains that cannot be removed later. Dust deposits on the silicone residues may lead to further contamination.

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 % RH) 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
adria blue	S140-04-C990
anthracite	S140-04-C67
grey	S140-04-C02
manhattan	S140-04-C43
sanitary grey	S140-04-C18
silk grey	S140-04-C77
snow-white	S140-04-C116
<b>Packaging unit</b>	<b>20</b>
<b>Pieces per pallet</b>	<b>1200</b>

#### Safety precautions:

Please observe the material safety data sheet.

After curing the product is completely odourless.

#### 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 experience. However, since conditions and methods of use and application of our products are beyond our control, we suggest that you 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.de/en/terms-and-conditions>