Technical datasheet

OTTOSEAL® S 140 SPECIAL

The hotel and spa silicone

1-component silicone sealant based on oxime, neutral cross-linking, MEKO-free | For indoor and outdoor application | S 140

Characteristics

- Highly active fungicide plus innovative OTTO Fungitect® Silver Technology - Double protection against mould infestation
- Compatible with natural stone - Does not cause greasy deposits on natural stones
- High resistance to notches and tearing - Resistant to high mechanical stresses
- Excellent weathering, ageing and UV-resistance

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
- Sealing of expansion and connection joints in floor and wall areas

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

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

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OTTO CHEMIE
SEALING & BONDING

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, type 3 [N/mm²]	~ 0,4
Tensile expansion according to ISO 37, type 3 [%]	~ 600
Tensile strength according to ISO 37, type 3 [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 production

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.
The adhesive surfaces must be cleaned and any contamination such as release agents, preservatives, grease, oil, dust, water, old adhesives/sealants and other substances impairing adhesion must be removed. Cleaning of non-porous substrates: Clean with OTTO Cleaner T (no flash-off time required) and a clean, lint-free cloth. Cleaning porous substrates: Clean surfaces mechanically, e.g. with a steel brush or a grinding disc, 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	-
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	+
Epoxid resin mortar	+
Glass	+
Wood, painted (solvent systems)	+
Wood, painted (aquaeous systems)	+
Wood, varnished (solvent systems)	+
Wood, varnished (aquaeous 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 resin panels	1216
Brass	1216 [2]
Natural stone / marble	1216
Natural stone (marble, granite, etc.) (permanent water stress)	1216 / 1218 [3]
Polyester	+
Polyester (permanent water stress and underwater)	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 metalls, such as copper, brass, etc. is possible. Upon curing un-blocked 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

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 is 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 are not suitable for full-area bonding, unless there are specific structural conditions that require such full-area application. If one-component silicones are to be used for thickness layers of more than 10 mm please contact our technical department beforehand.
For particularly open-pored natural stones with a very high capillary absorption function (according to the specification of the natural stone supplier) such as limestone e.g. Jura grey, quartzitic sandstone e.g. Valser quartzite and gneiss e.g. Onsernone, it is recommended to use a barrier primer in the area of the cut edges (or in the area where the sealant comes into contact with the natural stone). Please consult the Application Technology department.
The joint width must be calculated so that the permissible total deformation of the sealant is not exceeded by movements of the neighbouring components.
Indoors without daylight or in the case of sporadic artificial lighting, alkoxy/oxime/amine silicone sealants may exhibit a yellowing over time, especially in transparent and light colours. If technically possible, it is recommended to use acetate silicones in these cases.
The sealant is fungicidal and resistant to salt water and chlorine in the usual concentrations in swimming pools.
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.

Application information

We recommend OTTO natural stone smoothing agent (undiluted) for smoothing on marble and natural stones. Wash / remove excess smoothing agent 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 joins, 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 diminuition of durability or a change of material characteristics may arise.

Packaging

Glossy colors

	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
Pieces per packaging unit	**20**
Pieces per pallet	**1200**

Due to typographical reasons the colours shown below may differ from the original colours of the products.
For an exact colour display please request our original colour charts.

Safety precautions

Please observe the material safety data sheet.
After curing, the product is odourless.

Disposal

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

Brand information

EMICODE® is a registered trademark of GEV e. V. (Düsseldorf, Germany)

Warranty information

The above information and our technical application advice, whether verbal, in writing or by means of tests, are provided to the best of our knowledge, but are non-binding, including with regard to any third-party property rights. The information in this publication does not exempt the processor from carrying out their own tests on our products with regard to their suitability for

the intended processes and purposes. The application, use and processing of our products and the products manufactured on the basis of our technical application advice are beyond our control and are therefore the sole responsibility of the processor. If the application for which our products are used is subject to an official authorisation requirement, the user is responsible for obtaining these authorisations. We reserve the right to adapt the product to technical progress and new developments. For the rest, we refer to our General Terms and Conditions, in particular with regard to any liability for defects. You can find our GTC at www.otto-chemie.de.