

The premium neutral curing silicone sealant for natural stone and façade applications

Maxisil® Natural Stone

Technical Datasheet

Characteristics:

- Neutral-curing 1-component silicone sealant
- **Guarantee - does not cause any migratory staining on natural stone**
- Low modulus, **50% joint movement** capability making it Ideal for exterior façade applications
- High resistance to notches, tension and tearing
- Excellent weathering, ageing and UV-resistance, will not become dry, crack or brittle
- Non-corrosive
- Contains fungicides
- Available in a range of colours including "structure" colours with a stonelike surface. Custom colours also available
- Also available in "matt-finish" colours. See application tips section for technique on smoothing matt colours
- Stress expansion modulus at 100 % (DIN 53 504, S3A): 0,5 N/mm²

Fields of application:

- Designed specifically for sealing and jointing on marble and all **natural stones**, e. g. sandstone, quartzite, granite, porphyry etc. in interior and exterior areas
- Sealing of movement joints in floors, walls and **facades**
- Movement-compensating bonding of natural stone on metal, e. g. stone stairs on a metal construction
- Sealing and jointing of marble / natural stone swimming pools, also underwater joints
- Sealing of laminated and coated glass
- For the external sealing of mirrors in connection with natural stone
- Joint filling between concrete slabs and natural stone for both interior and exterior use.

Standards and tests:

- Tested according to EN 15651 – Part 1: F EXT-INT 25 LM / F EXT-INT CC 20LM
 - Tested according to EN 15651 – Part 3: XS 1
 - Tested according to EN 15651 – Part 4: PW EXT-INT 25 LM (1)
 - Tested according to ISO 16938-1 of SKZ Würzburg (Testing for migratory staining of sealants on natural stone)
 - Tested according to ASTM C 1248 by DL Laboratories, New York (Testing for migratory staining of sealants on natural stone)
 - "Highly recommendable non-hazardous building product" according to building material list (TOXPROOF) of the TÜV Rheinland, Germany
 - Suitable for applications according to IVD instruction sheet no. 1+3-1+3-2+9+14+23+25+27+30+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)
 - Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
 - Suitability for DGNB
 - French VOC-emission class A+
 - Certified according to GOS
 - Declaration in "baubook" Austria
- (1) Applies only to the matt shades of Maxisil N, all other shades comply with PW INT 12,5 E

Important information:

Before application, the user should ensure the materials in the contact area (solid, liquid and gaseous) are compatible with the sealant and also each other, so as they do not damage or alter (e. g. discolour) each other. If in doubt the user should consult each manufacturer of the surrounding substrates. During the material curing process, products of the crosslinker are released. Please ensure good ventilation during application and curing.

Once cured, 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.

Remark on the processing of the colour "stainless steel": Please note that when "modelling" the silicone, i. e. when silicone layers are pushed on top of each other (e. g. in corner areas) dark, clearly visible dividing lines could appear. These dividing lines can not be removed by smoothing the lines afterwards. This effect occurs solely for the colour "stainless steel" and is caused by a special colour pigment which is necessary to create the metallic effect. It is a typical characteristic of the colour "stainless steel" and it does not represent a deficiency of the material. In order to avoid such effect, layers of silicone should not be pushed on top of each other when smoothing the material.

Smoke from cigarettes or similar environmental influences may lead to discolouring of the sealant. Avoid contact with materials which contain bitumen and which release solvents, e. g. butyl, EPDM, neoprene, insulating- and bituminous paint.

For cleaning purposes, the use of neutral or alkaline detergents is preferable, as fungus multiplies quicker in an acidic environment.

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

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

Technical properties:

Skin-forming time at 23 °C/50 % RAH [minutes]	~ 10
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/cm ³]	~ 1,0
Density at 23°C according to ISO 1183-1, matt [g/cm ³]	~ 1,3
Shore-A-hardness according to ISO 868	~ 30
Permissible movement capability [%]	50%
Stress expansion modulus at 100% according to ISO 37, S3A [N/mm ²]	~ 0,5
Tensile expansion according to ISO 37, S3A [%]	~ 600
Tensile strength according to ISO 37, S3A [N/mm ²]	~ 1,4
Temperature resistance from/to [°C]	- 40 / + 180
Extrusion rate according to ISO 8394-1 [g/min.]	~ 130 - 160
Shrinkage of volume according to ISO 10563 [%]	< 10
Shelf life at 23 °C/50 % RAH for cartridge/foil bag [months]	15

1) Please pay attention to standards and tests

This data is not suitable for the issue of specifications. Please contact Maxisil before issuing specifications.

Pretreatment:

All adherent surfaces must be clean of 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 Maxisil Cleaner (airing time approx. 1 minute) using a clean, lint-free cotton cloth.

Cleaning porous substrates: Clean surfaces with steel-wire brush or a grinding disk to remove loose particles.

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

Primer Table:

The demands on elastic sealants and bonds depend on the respective exterior influences and substrates. Extreme fluctuations of temperature, tensile or shear forces, repeated contact with water etc. demand high bond strengths. In such cases it is advisable to apply primer according to the recommendations of our technical department in order to achieve maximum bond strength

ABS	T
Acrylic glass/PMMA (Plexiglas®, etc.)	T
Acrylic bathroom surfaces (e. g. bath tubs)	+ / 1101
Aluminium	+
Aluminium anodized	+
Aluminium powder-coated	1101 / T
Aluminium powder-coated (contains teflon)	T
Concrete	1105 / 1215 / 1218
Concrete block	1216
Lead	+
Stainless steel	1216
Iron	+
Epoxid resin coating	+ / 1216
Glass	+
Wood, painted (solvent systems)	+
Wood, painted (aqueous systems)	+
Wood, varnished (solvent systems)	+
Wood, varnished (aqueous systems)	+
Wood, untreated	+ (1)
Ceramic, glazed	+ (2)
Ceramics, unglazed	+
Artificial stone	+ / 1216
Plastic profiles (unplasticized, e. g. Vinnolit)	+ / 1227
Copper	+ / 1216 (3)
Melamine formaldehyde resins (e. g. Resopal®)	+ / 1216
Brass	+ / 1216 (3)
Natural stone	+ / 1216 (4)
Polyester	+
Polypropylene	T
Cellular concrete	1105 / 1215
Plaster	+ / 1105 / 1215
PVC unplasticized	1217 / 1227
PVC-soft-foils	+ / 1217 / 1227
Sandstone	1102
Tinplate	1216
Zinc, galvanised iron	1216

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

2) When using ceramic tiles with a special surface coating such as Ceramicplus of Villeroy + Boch we recommend a pre-treatment with Maxisil Cleaner.. When using ceramic tiles with other surface coatings it is advisable to contact our Technical Department or make preliminary tests.

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

4) Depending on the nature of external influences and the kind of natural stone it may be necessary to use a primer. For natural stone in contact with water (i.e. bathrooms and showers) we generally advise the use of Primer1216. For jointing natural stone in swimming pools and saunas and also for other applications under water please contact our technical department.

+ = good adherence without primer
 - = not suitable
 T = Test/pilot test advised

Application information: With natural stone applications, take care not to spread the sealant beyond the joint area, as the sealant is difficult to remove.

When using a primer, apply to the substrate and allow to dry for approx 2 hours. Once primer is dry, apply Maxisil N to the substrate. Apply with an even method, avoiding air entrapment. For best results the sealant should be smoothed with a smoothing agent and Applicator. For best results use Maxisil Smoothtex N (part number RDX2019) and Maxisil Applicator (part number RDXA3000).

For backfilling of joints please use a closed cell PE foam rod.

When tooling off matt finish colours with Maxisil Smoothtex N Smoothing Agent - please be aware: The joint should be tooled off once, with a smoothing tool emmersed in Maxisil Smoothtex N. Do not make repeated passes with the smoothing tool. This will avoid polishing the matt surface !
 For best results use Maxisil Smoothtex N Smoothing Agent (undiluted). Wash / remove excess agent immediately from the joint area.. We do not recommend the use of usual smoothing agents (e. g. dishwashing detergents etc.) as they have a high probability of staining some marble and natural stone.

Due to many possible influences during and after application, we recommend to first conduct a trial on the substrate and bonding area.

Please observe the recommended shelf life, printed on the packaging. The date printed is a "best before" indication.

We recommend to store our products unopened and in original packaging, in a dry cool place (< 60 % RAH) at temperatures of +15 °C up to +25 °C. If the products are stored and / or transported at higher temperatures / humidity for long periods (some weeks), shelf life / material performance can be reduced, causing a change in material characteristics.

Packaging:

	310 ml cartridge	400 ml aluminium foil bag
All colours	Maxisil N	on request
Packaging unit	20	20
Pieces per pallet	1200	900

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 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 use. Information given in this technical data sheet and explanations of Maxisil 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 Maxisil to prove their validity. The characteristics stated in this data sheet define the characteristics of the article broadly and concludingly. 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; robertsdesigns.com.