SILICON SEALANTS AND COMPLEMENTARY PRODUCTS OTTO-CHEMIE FOR THE SEALING OF FILLET AND EXPANSION JOINTS

OTTOSEAL S100
OTTOSEAL S105

Acetic-based single component curing silicone sealants

Characteristics:
Acetic-based single component curing silicone sealants. Excellent resistance to weathering, ageing and UV rays. Contain bacteriostatic and fungicide agents. Excellent workability. Surfaces exceptionally smoothed. Excellent adhesion to ceramic substrates.

Fields of application:
Sealing of expansion joints of ceramics and glass mosaics on floors and walls.
Expansion and fillet joints in healthcare environments.

Technical features:
Working temperature:
From +5°C to +35°C.
Filming time at +23°C:
approximately 10 minutes.
Hardening in 24 hours
to T=+23°C: 2-3 mm.
Overall distortion allowed 25%.
Heat resistance: from -40°C to +180°C.
Density at T=+23°C: approx. 1.0 g/cm^3.
Preservation: 18 months inside the original packaging in a cool and dry place.

OTTOSEAL S70

Neutral-based single component curing silicone sealant.

Characteristics:
Neutral-based single component curing silicone sealant. It absolutely does not stain the edges of the joints on natural stone. High resistance to tearing and carving. Excellent resistance to weathering, ageing and UV rays. Non-corrosive.
Contains bacteriostatic and fungicide agents.
Also available in "structured" colours with grainy surface similar to stone and opaque colours.

Fields of application:
Sealing of expansion joints between marble and natural stones like sandstone, quartzite, granite, porphyry etc. in indoor and outdoor environments.
Sealing of expansion joints on walls and façades.
Sealing of submerged joints between natural stone and ceramics in tubs and swimming pools.

Technical features:
Application time: from +5°C to +35°C.
Filming time at +23°C: approx. 5 minutes
Hardening in 24 hours at T=+23°C 3 mm.
Overall distortion allowed 20%.
Heat resistance: from -40°C to +180°C.
Density at T=+23°C: approx. 1.0 g/cm^3.
Preservation: 15 months inside the original packaging in a cool and dry place.

OTTOSEAL S34

Neutral-based single component curing silicone sealant.

Characteristics:
Neutral-based single component curing silicone sealant. High mechanical resistance, resistance to tearing and carving. High resistance to chemical agents. Exceptional resistance to temperatures up to + 265°C. Excellent resistance to extreme weather conditions, ageing and UV rays. Non-corrosive. For surfaces subject to forklift vehicle traffic. Resistant to washing with machines that use high-pressure water.

Fields of application:
Floor and fillet joints sealing subject to aggressive chemical attack such as in dairies, slaughterhouses, food and beverage production facilities, canteens and kitchens, etc. Floor and fillet joints sealing subject to heavy loads such as facilities for storage and production, construction sites, car parks, underground car parks, garages, car washes, etc.

Technical features:
Application time: from +5°C to +35°C.
Filming time at +23°C: approx. 10 minutes.
Hardening in 24 hours at T=+23°C 2-3 mm.
Overall distortion allowed 20%.
Heat resistance: from -40°C to +265°C.
Density at T=+23°C: approx. 1.16 g/cm^3.
Preservation: 12 months inside the original packaging in a cool and dry place.

OTTOCOLL M500

Single-component STPU hybrid polymer-based adhesive sealant.

Characteristics:
Single-component STPU hybrid polymer-based adhesive sealant.
Optimal adhesion without primer with multiple substrates, even when exposed to water.
High mechanical resistance, tear and cut resistant.
For stress-compensating bonding and dynamic stresses.
Good weathing and ageing resistance.
Suitable for bonding over waterproof membranes LITO-PROOF.

Fields of application:
For indoor and outdoor application
For stress-compensating bonding and assembly of various materials, such as wood, wood-based materials, glass, metals (alluminium, stainless steel, anodized alluminium, brass, copper), plastic materials (rigid PVC, flexible PVC, fibreglass reinforced plastic, etc.), mineral substrates (brick, tiles, ceramics), fireproof panelling (plasterboard etc.)

Technical Features
Colour: white
Working temperature: from +5°C to +40°C
Skin-forming time at +23°C: approx. 20 minutes
hardens in 24 hours at +23°C: approx. 2-3 mm
Thermal resisitance: from -40°C to +90°C
Density at +23°C: approx. 1.4g/cm^3
Storage: 9 months in the original closed packaging in a cool and dry area.
Packaging: 310 ml tubes

OTTOCOLL M501

Single-component STPU hybrid polymer-based adhesive.

Characteristics:
Single-component STPU hybrid polymer-based adhesive.
Optimal adhesion without primer with multiple substrates, even when exposed to water.
Good weathing and ageing resistance.
High mechanical resistance, tear and cut resistant.

Fields of application:
Particularly suitable for bonding transparent glass mosaics on glass and Plexiglas (see page 31). For stress-compensating bonding and assembly of various materials, such as wood, wood-based materials, glass, metals (aluminium, stainless steel, anodized aluminium, brass, copper, plastic materials (rigid PVC, flexible PVC, fibreglass reinforced plastic, etc.) mineral substrates (brick, tiles, ceramics), fireproof panelling (plasterboard, etc.)

Technical Features
Colour: transparent
Working temperature: from +5°C to +40°C
Skin-forming time at +23°C: approx. 45 minutes
hardens in 24 hours at +23°C: approx. 2-3 mm
Thermal resisitance: from -40°C to +90°C
Density at +23°C: approx. 1.1 g/cm^3
Storage: 9 months in the original closed packaging in a cool and dry area.
Packaging: 310 ml tubes

OTTO-CHEMIE complementary products

OTTO Primer 1216

Characteristics:
Single component silicone resin solution.

Fields of application:
Improvement of adhesive properties of the OTTO Chemie sealants.

Technical features:
Consumption: approximately 30-50 g/m^2.
Density at T=+23°C: approx. 0.76 g/m^3.
Preservation: 12 months inside the original packaging in a cool and dry place.
Packaging: 100 ml flacon

OTTO Primer 1105

Characteristics:
Single component synthetic resin solution.

Fields of application:
Barrier to the alkalinity of surfaces.
Improvement of adhesive properties of the OTTO Chemie silicone sealants on absorbing mineral-based supports such as concrete, cement plaster and gypsum, fibre cement, cellular concrete.

Technical features:
Consumption: approx. 100-300 g/m^2 according to absorbing capacity.
Density at T=+23°C: 0.94 g/m^3.
Preservation: 12 months inside the original packaging in a cool and dry place.
Packaging: 100 ml flacon

For absorbing substrates

OTTO Primer 1218

Characteristics:
Single component synthetic resin solution co-polymerized based with acrylic silicone solvent.

Fields of application:
Improvement of adhesive properties of the OTTO Chemie silicone sealants on absorbing mineral substrates in permanent wet conditions such as tubs and swimming pools.

Technical features:
Consumption: approx. 80-200 g/m^2 according to absorbing capacity.
Density at T=+23°C: 0.95 g/m^3.
Preservation: 12 months inside the original packaging in a cool and dry place.
Packaging: 100 ml flacon

OTTO Cleanprimer 1101

Characteristics:
Solvent-based solution with single component adhesive inducing additives.

Fields of application:
Cleaning and simultaneous improvement of the OTTO Chemie silicone sealant adhesive properties on coated and non-coated metallic substrates and plastic materials. Do not apply the product beyond the edges of the joints and beyond adhesive surfaces to avoid dirtying or cause aesthetic alterations.

Technical features:
Consumption: approx. 30-50 g/m^2.
Density at T=+23°C: 0.73 g/m^3.
Preservation: 12 months inside the original packaging in a cool and dry place.
Packaging: 100 ml flacon

For acrylic tubs

X-GL SMOOTHING AGENT

Characteristics:
Aqueous solution of surface-active substances.
The product does not irritate and dry the skin thanks to the dermatological tested active ingredients.
It may be diluted with water (2 parts X-GL + 1 part water).
It keeps glossy surface of the sealant unaltered.

Fields of application:
For the surface smoothing of the OTTO Chemie silicone sealants.
Not suitable for natural stone.

Technical features:
Preservation: 12 months in the original packaging in cool and dry places at temperatures between +5°C and +35°C.
Packaging: 250ml flacon

X-GLM SMOOTHING AGENT

Characteristics:
Aqueous solution of surface-active substances. The product does not irritate and dry the skin thanks to the dermatological tested active ingredients. Ideal for delicate marble and natural stone qualities. To use purely, do not dilute.
Minimises the risk of stains caused by smoothing agents.
It keeps glossy surface of the sealant unaltered.

Fields of application:
For the surface smoothing of the OTTO Chemie silicone sealants.

Technical features:
Preservation: 12 months in the original packaging in cool and dry places at temperatures between +5°C and +35°C.
Packaging: 250ml flacon

OTTO Cleaner T

Characteristics:
Mixture of solvents.
High cleaning and degreasing efficiency.
Dries quickly without leaving adhesive residues.
It does not require drying.
It does not contain halogenated hydrocarbons.

Fields of application:
Ideal for preventive cleaning of surfaces on which perform sealing with OTTO Chemie silicone sealing.

Technical features:
Preservation: 5 years in the original packaging in a cool and dry place at temperatures between +5° C and +35°C.
Packaging: 100 ml flacon

OTTO Primer 1217

Mixture of solvents.
High cleaning and degreasing efficiency.
Dries quickly without leaving adhesive residues.
It does not require drying.
It does not contain halogenated hydrocarbons.

Fields of application:
Ideal for the preventive cleaning of surfaces on which Otto Chemie silicone sealants will be used for sealing.

Technical features
Preservation: 5 years in the original packaging in a cool and dry place at temperatures between +5° C and +35°C.
Packaging: 100 ml flacon

TARGET ENVIRONMENT		OTTO CLEANER T	PRIMER				Sealants			Smoothing agent	
			OTTO Primer 1216*	OTTO Primer 1105	OTTO Cleanprimer 1101	OTTO Primer 1218	OTTOSEAL S100/S105	OTTOSEAL S70	OTTOSEAL S34	X-GLM	X-GL
Indoor environments	Flexible expansion joints between ceramic tiles in residential indoor floors and covering.	●	-	-	-	-	●	●	-	●	●
	Flexible expansion joints between natural stone in residential indoor floors and covering.	●	●	-	-	-	-	●	-	●	-
	Flexible expansion joints between ceramic tiles and natural stone in commercial floors with average traffic.	●	●	-	-	-	-	●	-	●	-
	Flexible expansion joints between ceramic tiles in indoor industrial floors with heavy traffic.	●	●	-	-	-	-	-	●	●	●
	Flexible expansion joints in concrete substrate in indoor industrial floors with heavy traffic.	●	-	●	-	-	-	-	●	-	●
Wet areas	Sealing of ceramic tiles, glass mosaics and fittings in bathrooms and showers.	●	-	-	●	-	●	●	-	●	●
	The sealing of natural stone and fittings in bathrooms and showers.	●	●	-	-	-	-	●	-	●	-
	Sealing of ceramic tiles and natural stones at tanks, swimming pools and Spa facilities also containing seawater.	●	-	-	-	●	-	●	-	●	-
	Sealing of ceramic tiles and glass mosaics in steam baths and hammam baths.	●	●	-	-	-	-	●	-	-	●
	Natural stone sealing in steam baths and hammam baths.	●	●	-	-	-	-	●	-	●	-
Outdoor environments	Flexible expansion joints between ceramic tiles and natural stones on balconies, terraces and walkways on facades.	●	●	-	-	-	-	●	-	●	-
	Flexible expansion joints between ceramic tiles on facades.	●	●	-	-	-	-	●	-	●	●
	Flexible expansion joints between natural stones on facades.	●	●	-	-	-	-	●	-	●	-

*Although Otto Primer 1216 is suitable for most natural stones, there are particular types of stone materials for which it is necessary to carry out preventive tests in order to verify its absolute compatibility.
Consult our technical department for an appropriate choice.

JOINTS - Guide for proper execution

Sizing

Already at the design stage, it will be required to take the correct sizing of the joints into consideration. This applies to both fillet joints between floors and walls and expansion joints, both indoor and outdoor. The criteria to be considered for an adequate sizing of the joints are:

-thermal excursion;

-thermal expansion due to the different types of building components;

-distance between expansion joints;

-settling movements;

-length variations of components due to moisture;

-manufacturing tolerances involving building components;

-overall deformation of the sealant.

Useful tips for the proper sizing of the joints can be found in Focus On under "Joints in Ceramic Tiling" which can be downloaded from our website www.litokol.it.

Cleaning

It is absolutely essential to clean up the joint and its sides of adhesion from dust. If for cleaning, the joint has been dampened, it must be dried or wait until it is completely dry. Clean the sides of adhesion with OTTO CLEANER T using a soft cloth. The sides of the joints must be free of dirt, dust or grease.

Protection of joints.

In the case of natural stones (especially sandstone) or ceramic tiles characterised by porous, irregular surfaces or composed of delicate enamels, it is indispensable to cover the joint with masking tape immediately after the cleaning.

Joint depth

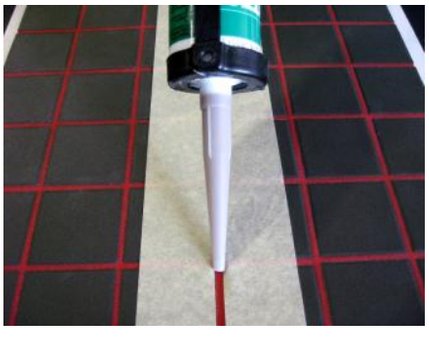
The optimal ratio between the width and depth constitutes an important factor in the durability of sealing. For widths of up to 5 mm, the depth must be equal to the width, while for widths over greater than 5 mm, the depth must be equal to ½ the width. It is also necessary to allow the sealant to stretch and compress freely, avoiding that it adheres to the bottom of the joint but only on the sides of the ceramic tiles or natural stone slabs. To achieve this and to adjust the depth of the joint, insert the properly sized LITOGAP seal in advance. The diameter of the LITOGAP cord should be chosen so that the cord can be inserted into the joint applying a certain pressure. Only this ensures proper joint filling and therefore limiting the depth of the joint.

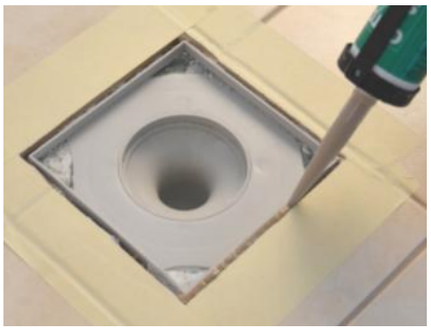
Application of the primer

When required, apply the adhesion inducing primer using a soft brush in the case of absorbent substrates or with a soft cloth in case of non-absorbent substrates. Refer to the information provided in the chart.

Application of the silicone sealant

After choosing the appropriate sealant depending on the target environment and the material to be sealed, sealing is performed. Cut off the head of the thread and insert the plastic spout giving it a 45° cut, obtaining the same diameter of the joint to be sealed. Insert the cartridge into the gun and extrude the product as evenly as possible.





JOINTS - Guide for proper execution

Smoothing the joint
This operation should be performed prior to the superficial filming of the sealant. Pour the X-GL smoothing agent (suitably diluted) or X-GLM (pure) into a clean container in which dip the tool used to smooth OTTO Fugenfux, which is to be chosen with the bevel well-suit for the joint to create. Apply the tool to smooth OTTO Fugenfux dampened with a smoothing agent on the filled joint by exerting a regular pressure and scrape the excess sealant.

Otto Fugenfux
Smoothing tools.
Packaging: bag of 3 pcs.

INFORMATION ON SAFETY

Refer to the product's safety sheets available upon request.

PRODUCT FOR PROFESSIONAL USE

Although the information in this technical sheet is source of our best experience, it is merely indicative.
Each specific case must be subjected to practical preliminary tests by the user who undertakes the responsibility for the final work result.

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