



DURASIL® E 811

Acid curing silicone sealant for sanitary applications, glass- and metal construction

Characteristics

DURASIL® E 811 is a acid curing one-component silicone sealant for the durable caulking and sealing of joints, with resistance to ozone, UV radiation, weather effects, water, a multitude of chemical substances and temperature extremes up to 180 °C.

It is characterized by a particularly good rheological body and can therefore be easily modeled and smoothed.

DURASIL® E 811 is mould inhibiting equipped and available in a great variety of colors.

Areas of application

Indoor and outdoor sealing in the field of glass and metal construction, in sanitary areas or kitchens, in areas of high humidity, industrial as well as general sealing and bonding applications.

Compliance/ inspections

EN 15651-1	F EXT-INT CC class 25 LM
EN 15651-2	G CC class 25 LM
EN 15651-3	S class XS1
EN 15651-4	PW EXT-INT CC class 20 LM
GEV EMICODE® EC 1 ^{plus} R	– very low-emission
ISO 846-B	Mikroorganismen und Schimmelpilze, Wachstumsintensität 0
VOC Frankreich	emission class A+
REACH	compliant to regulation (EG) Nr. 1907/2006

Technical Data

Base:	Pure silicone, moisture curing	
Curing system:	Acid curing	
Fission product:	Acetic acid	
Fungicidal equipment:	yes	
Specific gravity:	≈ 1,03 g/cm ³	EN/ISO 1183-1
Consistency:	pasty, stable ISO 7390	
Processing temperature:	+ 5 - + 40 °C ¹⁾	
Skin formation time:	≈ 15–20 min. ²⁾	
Curing rate:	≈ 2 mm/day ²⁾	
Shrinkage:	≤ 5 Vol.-%	ISO 10563 ³⁾
Module at 100% expansion:	≤ 0,4 N/mm ²	ISO 37 ³⁾
Hardness:	≈ 20° Shore A	ISO 868 ³⁾
Movement capability:	25 %	
Temperature resistance:	- 40 - + 180 °C	
Fire classification:	class E	EN 13501
	class B2	DIN 4102

¹⁾ Temperature of the material, underground and environment

²⁾ at 23 °C and 50 % relative humidity (with higher temperature and / or humidity the skin formation and curing time reduces and vice versa)

³⁾ after 28 days at 23 °C and 50 % relative humidity

Information for building certification

DGNB , version 2015 und 2018	ENV1.2 Risks for local environment			
Criteria matrix, line 12	Quality grades			
	1	2	3	4
Chlorinated paraffins < 0,1%	√	√	√	√
Solvents < 1%	√	√	√	√
Hydrocarbon plasticizers < 0,1%	√	√	√	√

DGNB: Deutsche Gesellschaft für Nachhaltiges Bauen – DGNB e.V.

LEED	Indoor Environmental Quality
IEC Credit 4.1: Low Emitting Materials: Adhesives and Sealants	
VOC Content < 250 g/Liter ✓	

LEED: Leadership in Energy and Environmental Design

Constructive requirements

The width of movement joints has to be planned in a way that guarantees that the permitted maximum deformation of DURASIL® E 811 will not be exceeded by the expected movements. Joints to be sealed should be at least 5 mm wide. A square cross-section is recommended up to a joint width of 5 mm. For joints with a larger width the joint depth should be at least half the joint width.

To limit the depth of joint the usage of filling materials like backer rods or glazing tapes is recommended.

Adherent surfaces need to be dry, sustainable, dust free, release agent free, oil free, fat free as well as free of adherent components like rust, cement slurries, paint remains, remains of old sealants etc. The sealant needs to be freely movable. A three-point adhesion should be avoided.

The technical requirements apply for first grouting as well as for the correction of damaged joints.

Adhesion and compatibility

DURASIL® E811 has a wide adhesion spectrum. But because of the variety of possible influences on the adhesion behavior, it is necessary to test adhesion and compatibility before the usage on surfaces with not yet known behavior. Dependent on type and structure of the underground materials as well as the subsequent stresses (tension and shear forces, influence of temperature, humidity and other media) it can, dependent on suitable test results, be recommendable to improve the adhesion of the sealant by using a special cleaner or a primer (e.g. ARA® Haftreiniger 1200 for non-absorbent, ARA® Primer P for porous or absorbent undergrounds).

On surfaces with adhesion rejecting characteristics like polyolefin (PE, PP), silicone, PTFE (Teflon®), butyl rubber, neoprene, EPDM, tarry, bituminous or waxy materials a sufficient adhesion is not achievable.

DURASIL® E 811 has a very good compatibility with a variety of common building metals or synthetic undergrounds. It is a pure silicone and free of alkaline components, extenders or solvents.

The durable compatibility between sealant and adjacent present or for the later contact intended materials (e.g. coating systems) or complete function units (e.g. glazing systems) has to be ensured before the usage in order to avoid stain, reduced adhesion, discoloring, migration effects or other harmful consequences. A persistent contact with materials which emit or absorb mobile components (e.g. plasticizers, bitumen) should be avoided. Therefore DURASIL® E 811 must not be used on natural stone and on or near acid sensitive materials (risk of corrosion).

Effects of colored or discoloring substances can lead to an optical change of the sealant. This applies in particular to substances in tobacco smoke, dyes, dirt, tar and bituminous substances, but also in a colonization by mold.





DURASIL® E 811

Acid curing silicone sealant for sanitary applications, glass- and metal construction

Processing guideline

DURASIL® WE 811 plus can be applied on accordingly prepared joints with customary processing equipment for cartridges or sausages. It is important to ensure sufficient humidity during the process of curing.

The sealant can be smoothed or modeled with suitable tools before the skin formation sets in. We recommend the usage of a sealant compatible smoother (e.g. ARAGLIDE). Surpluses of smoother have to be removed thoroughly of the adjacent materials shortly after the application.

It is advisable to tape the joint edges on not polished or rough surfaces during the pointing works, in order to avoid uncontrolled spreading beyond the joint edges. Hereby caused impurities may be not restless removable afterwards. If tapes have been used to mask the joint edges, they have to be removed before the skin formation sets in.

The curing of DURASIL® E 811 is dependent on the ambient temperature and humidity. Low humidity such as on frosty winter days will decelerate the skin formation and curing of the sealant.

Until the material has completely hardened, all kinds of dirt should be kept away from the sealant. During the curing process the joints should not be mechanically (e.g. with stretch, shock, vibration) stressed (early stress).

Handling of cured joints

DURASIL® E 811 is a soft-elastic sealant. In order to prevent damage, abrasive detergents should not be used for cleaning. Cleaning can be performed with a soft cloth and a neutral, slightly lubricating cleaner like for example soap water or a non-aggressive household cleaner. Only soft and absorbing cloths should be used for drying the surface.

To avoid mold infestation the sealant surfaces in areas with characteristically high humidity (e.g. sanitary facilities, bathrooms, wet areas in kitchens) should be kept especially clean and not permanently wet. DURASIL® E 811 contains fungal substances, but they cannot prevent infestation of substances, deposited on the surface (e.g. soap residues, dirt etc.). A fungal infestation of these superficial deposits can lead to discoloring or an infestation of the underneath situated sealant. In the long run such an infestation can only be prevented by clean and dry surfaces of the sealant.

Availability

DURASIL® E 811 is available in a wide range of colors. We therefore refer to our current color sample cards. The production and delivery of special color shades on request is possible.

Forms of packaging

310 ml cartridges, 20 pieces per box

400 or 600 ml sausages, 20 pieces per box

Storage and durability

In unopened original packaging and cool (< 25 °C) storage 18 months durable from the date of manufacturing.

An exceeding of the imprinted expiry date does not necessarily cause an unusability of the material. However in this case, it should be tested with regard to the required characteristics for the intended use.

Safety information

A contact of the uncured product with eyes, skin and mucous membranes should be avoided. When in contact with one of the previous mentioned body parts, clean with water and if necessary soap.

Detailed information for secured handling can be looked up in our safety data sheets, which can be found on our website.

The in this brochure contained data concerning our products and fields of application are based on our current knowledge and experiences. They are made to the best of our knowledge, however they are of a general nature and cannot include all of in practical applications possible influences and application conditions. The users of our products therefore need to independently check the suitability and legal admissibility of the intended application before using it. We guarantee that our products comply with the current product descriptions. However, we are only liable for a specific applicability, a certain result or characteristic, if we have explicitly assured it in written form. Every additional warranty is excluded. We reserve us the right of changing our products, their descriptions and specifications. Concerning customer warranty rights and our warranty obligations we refer to our general terms and conditions.

State: 2020-12 – With the release of this edition all previous editions lose their validity.