BUILDING TRUST

PRODUCT DATA SHEET

Sikasil®-400 Heat Sealant

HEAT RESISTANT SILICONE SEALANT

DESCRIPTION

Sikasil®-400 Heat Sealant is a 1-part sealant which is resistant to high temperatures. Internal and external use.

USES

A sealant to seal heat exposed construction components and materials such as:
- High performance gaskets
- Industrial and domestic oven doors
- Metal chimneys
- Ducting systems
- Other heating appliances

CHARACTERISTICS / ADVANTAGES

- Heat resistant up to 270 °C for long periods and up to 300 °C for short exposures
- Short tack free time, fast curing
- High flexibility from −40 to +270 °C
- Red colour for easy installation identification

PRODUCT INFORMATION

Composition	Acetoxy silicone	
Packaging	290 ml cartridge, 12 cartridges per box	
Colour	Red	
Shelf life	12 months from the date of production	
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging.	
Density	~1,05 kg/l	(ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	~20 (after 28 d)	(ISO 868)
Tensile Strength	~1,2 N/mm^2	(ISO 37)
Secant Tensile Modulus	~0,36 N/mm^2 at 60 % elongation (23 °C)	(ISO 8339)
Elongation at Break	~400 %	(ISO 37)

Elastic Recovery	~90 %	(ISO 7389)
Tear Propagation Resistance	~1,6 N/mm	(ISO 34)
Service Temperature	–40 °C min. / +270 °C max. All above values tested in accordance with Corporate Quality Procedure	(CQP 513-1)
Joint Design	The joint width must be designed to suit the movement capability of the sealant. The joint width shall be ≥ 6 mm and ≤ 20 mm. A width to depth ratio of 2:1 must be maintained. Joints ≤ 10 mm in width are for crack control and therefore non-movement joints. For larger joints contact Sika Technical Services for additional information.	

APPLICATION INFORMATION

Yield

Joint width mm	Joint depth mm	Joint length m per Cartridge (290 ml)
10	10	2,9
15	12	1,6
20	17	0,9

Backing Material	Use closed cell, polyethylene foam backing rods	
Sag Flow	0 mm (20 mm profile, 23 °C)	(ISO 7390)
Ambient Air Temperature	+5 °C min. / +40 °C max.	
Substrate Temperature	+5 °C min. / +40 °C max., min. +3 °C above dew point temperature	
Curing Rate	~5 mm/24 h (23 °C / 50 % r.h.)	(CQP 049-2)
Skinning time	~8 min (23 °C / 50 % r.h.)	(CQP 019-1)

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, cement laitance, old sealants and poorly bonded paint coatings which could affect adhesion of the adhesive / sealant. The substrate should be of sufficient strength to resist with the stresses induced by the sealant during movement. Removal techniques such as wire brushing, grinding, sanding or other suitable mechanical tools can be used.
All dust, loose and friable material must be completely removed from all surfaces before application of any activators, primers or adhesive / sealant.
Sikasil®-400 Heat Sealant adheres without primers and/or activators. However, for optimum adhesion, joint durability and critical, high performance applications the following priming and/or pre-treatment procedures shall be followed:
Non-porous substrates
Aluminium, anodised aluminium, stainless steel, PVC, galvanised steel, powder coated metals or glazed tiles, slightly roughen surface with a fine abrasive pad. Clean and pre-treat using Sika® Cleaner P or Sika® Aktivator-205 applied with a clean cloth. Before bonding / sealing, allow a waiting time of > 15 minutes (< 6 hours).
Other metals, such as copper, brass and titanium-zinc, clean and pre-treat using Sika® Cleaner P or Sika® Aktivator-205 applied with a clean cloth. After a waiting time of > 15 minutes (< 6 hours). Apply Sika® Primer-3 N applied by brush. Allow a further waiting time of > 30 minutes (< 8 hours) before bonding / sealing.
PVC has to be cleaned and pre-treated using Sika® Cleaner P applied with a clean cloth. Before bonding / sealing, allow a waiting time of > 15 minutes (< 6 hours).

Note: Primers are adhesion promoters and not an alternative to improve poor preparation / cleaning of joint surfaces. Primers also improve the long term adhesion performance of the sealed joint.

APPLICATION METHOD / TOOLS

Masking
It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing.
Joint Backing
After the required substrate preparation, insert a suitable backing rod to the required depth.
Priming
Prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.
Application
Prepare the end of the cartridge before or after inserting into the sealant gun then fit the nozzle. Extrude Sikasil®-400 Heat Sealant into the joint ensuring that it

comes into full contact with the sides of the joint and avoiding any air entrapment.

Finishing

As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth finish.

Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Do not use tooling products containing solvents.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, hardened material can only be removed mechanically. For cleaning skin use Sika® Cleaning Wipes-100.

FURTHER INFORMATION

- Pre-treatment Sealing and Bonding Chart

IMPORTANT CONSIDERATIONS

- For good workability, the sealant temperature must be +20 °C.
- Application during high temperature changes is not recommended (movement during curing).
- Before sealing, check adhesion and compatibility of paints and coatings by carrying out preliminary trials.
- Full surface applications are not recommended since the inner part of the sealant layer may never cure.
- Do not use on porous substrates such as concrete, stone, natural stone, marble and granite. Leaching can occur on these substrates.
- Do not use on alkaline substrates such as concrete, plaster or brick.
- Do not use on natural rubber, EPDM rubber or on any building materials which might leach oils, plasticisers or solvents that could degrade the sealant.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might leach oils, plasticizers or solvents that could attack the sealant.
- Do not use on polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE / Teflon), and certain plasticised synthetic materials. Preliminary trials are recommended or contact Sika Technical Services.
- Do not use to seal joints in and around swimming pools.
- Do not use for joints under water pressure or for permanent water immersion.
- Do not use to seal glass or in floor or sanitary joints.
- Do not use for bonding glass or structural glazing.
- Do not use for structural bonding.
- Do not expose uncured Sikasil®-400 Heat Sealant to alcohol containing products as this may interfere with the curing reaction.
- Acetic acid released during the curing of Sikasil®-400 Heat Sealant can cause corrosion of mirror silver and sensitive metals such as copper, brass and lead.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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