

# PRODUCT DATA SHEET

## SikaSeal®-174

Neutral-curing silicone sealant for window and door frames

### PRODUCT DESCRIPTION

SikaSeal®-174 is a neutral-curing alkoxy sealant. It is used for sealing window and door perimeters as well as sanitary facilities.

### USES

The Product is used for sealing the following types of joints:

- Connection joints
- Expansion joints

The Product is used for sealing in the following areas:

- Window frames, door frames, and windowsills
- Wet rooms
- Sanitary facilities
- Around bathtubs, showers, and sinks
- Humid areas in residential homes

The Product is used for sealing glass in the following areas:

- Greenhouses
- Wintergardens
- Humid areas in residential homes

The Product is used on many construction materials and substrates such as:

- Glass
- Ceramics
- Tiles
- Enamel
- Clinker
- Aluminium
- Steel
- Wood

For information about unsuitable substrates or substrates of limited suitability, refer to section Substrate quality.

The Product is used for interior and exterior applications.

The Product is used in warm and cold climates.

### CHARACTERISTICS / ADVANTAGES

- Very good resistance to UV exposure
- Very good resistance to weathering
- Non-sag
- Very good adhesion to many construction materials
- Very good resistance to mold growth
- Very good elasticity and flexibility (movement capability  $\pm 25\%$ )
- Temperature resistance from  $-40\text{ °C}$  to  $+150\text{ °C}$
- Non-corrosive
- Very low VOC emissions
- Very low odour

### ENVIRONMENTAL INFORMATION

- VOC emission classification GEV Emission EC1<sup>plus</sup>

### APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 15651-1:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 1: Sealants for facade elements
- CE marking and declaration of performance based on EN 15651-2:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 2: Sealants for glazing
- CE marking and declaration of performance based on EN 15651-3:2012 Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 3: Sealants for sanitary joints

## PRODUCT INFORMATION

|                     |  |                   |
|---------------------|--|-------------------|
| Product Declaration | EN 15651-1:2012  | F EXT INT CC 25LM |
|                     | EN 15651-2:2012  | G CC 25LM         |
|                     | EN 15651-3:2012  | S XS1             |
| Chemical Base       | Alkoxy silicone  |                   |
| Packaging           | 300 ml cartridges<br>Refer to the current price list for available packaging variations.   |                   |
| Shelf Life          | 18 months from 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.<br>Refer to the current Safety Data Sheet for information on safe handling and storage. |                   |
| Colour              | Available in a range of colours, refer to the price list for further information.  |                   |
| Density             | 1.0 kg/l   | (ISO 1183-1)      |

## TECHNICAL INFORMATION

|                             |   |            |
|-----------------------------|---|------------|
| Shore A Hardness            | 24 (after 28 days)  | (ISO 868)  |
| Tensile Strength            | 0.7 N/mm <sup>2</sup>   | (ISO 8339) |
| Secant Tensile Modulus      | 100 % elongation at +23 °C 0.40 N/mm <sup>2</sup>   | (ISO 8339) |
| Elongation at break         | 400 %   | (ISO 37)   |
| Movement Capability         | ± 25 %  | (ISO 9047) |
| Elastic Recovery            | > 70 %  | (ISO 7389) |
| Tear Propagation Resistance | 5.0 N/mm  | (ISO 34-2) |
| Service Temperature         | Maximum   | +150 °C    |
|                             | Minimum   | -40 °C     |
| Joint Design                | The joint dimensions must be designed to suit the movement capability of the sealant. For joint widths more than 10 mm and less than 20 mm, the minimum joint depth is 10 mm.<br>For larger joints, contact Sika Technical Services for additional information. |            |

## APPLICATION INFORMATION

|                         |  |        |            |
|-------------------------|--|--------|------------|
| Sag Flow                | 20 mm profile at +23 °C  | < 1 mm | (ISO 7390) |
| Product Temperature     | Maximum  | +40 °C |            |
|                         | Minimum  | +5 °C  |            |
| Ambient Air Temperature | Maximum  | +40 °C |            |
|                         | Minimum  | +5 °C  |            |
| Substrate Temperature   | Maximum  | +40 °C |            |
|                         | Minimum  | +5 °C  |            |
|                         | Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point. |        |            |
| Backing Material        | Use closed cell, polyethylene foam backing rod or backing tape.  |        |            |

|                    |                     |                   |            |
|--------------------|---------------------|-------------------|------------|
| <b>Curing Rate</b> | +23 °C at 50 % r.h. | 3 mm per 24 hours | (CQP049-2) |
| <b>Skin Time</b>   | +23 °C at 50 % r.h. | 35 minutes        | (CQP019-1) |

## VALUE BASE

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

## FURTHER DOCUMENTS

Pretreatment Chart Constructive Sealants and Adhesives

## ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

The Product must not be used on the following substrates:

- Pre-stressed polyacrylate or polycarbonate
- Bitumen, natural rubber or EPDM

On the following substrates, the Product may exhibit poor adhesion:

- Polyethylene (PE)
- Polypropylene (PP)
- PTFE (Teflon®)

Perform a preliminary adhesion test on the above substrates before full application.

Contact Sika Technical Services for additional information.

### SUBSTRATE PREPARATION

#### Inadequate surface preparation

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

#### Substrate testing

Note: Adhesion tests on project specific substrates must be performed and procedures agreed with all parties before full project application. For more detailed advice and instructions contact Sika Technical Services.

The substrate must be sound, clean, dry and free of contaminants such as dirt, oil, grease, cement laitance, sealant residues and poorly bonded coatings which could affect adhesion of the primer and sealant.

The substrate must be of sufficient strength to cope with the stresses induced by the sealant during movement.

1. Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical tools to remove all weak substrate material.
2. Repair all damaged joint edges with suitable Sika repair products.
3. Remove all dust, loose and friable material from all surfaces before application of the sealant.

If tested or supported by experience, the Product can be used without primers or activators on many substrates.

#### NON-POROUS SUBSTRATES

Aluminium, anodised aluminium, stainless steel, galvanised steel, powder coated metals, glazed tiles, or other metals, such as copper, brass and titanium-zinc.

1. Lightly roughen the surface with a fine abrasive pad.
2. Clean and pre-treat using Sika® Aktivator-205 with a clean cloth. Wait until the flash off time has been achieved.
3. Apply Sika® Primer-3 N by brush.

PVC substrates.

1. Lightly roughen the surface with a fine abrasive pad.
2. Clean and pre-treat using Sika® Aktivator-205 with a clean cloth. Wait until the flash off time has been achieved.
3. Clean and pre-treat using Sika® Primer-215 applied with a brush.

Glass substrates

1. Clean and pre-treat using Sika® Cleaner P applied with a clean cloth and wait until the flash off time has been achieved.

#### POROUS SUBSTRATES

Concrete, aerated concrete and cement based renders, mortars and bricks.

1. Prime surface using Sika® Primer-3 N applied by brush.

For more details of the primer or pre-treatment products refer to the individual Product Data Sheet. Contact Sika Technical Services for additional information.

## APPLICATION

### IMPORTANT

#### **Strictly follow installation procedures**

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

### IMPORTANT

#### **Absorbency of natural stone substrates**

Staining from plasticiser migration may occur when used on natural stone such as granite, marble or limestone substrates.

1. Carry out preliminary trials before full project application.
2. Contact Sika Technical Services for further advice.

### IMPORTANT

#### **Application in confined spaces**

Atmospheric moisture is required for the Product to cure.

1. Do not use in a totally confined space.

#### **Preconditions**

The flash-off time of the primer has been achieved.

1. Apply masking tape where neat or exact joint lines are required.
2. After the required substrate preparation, insert a backing rod to the required depth.
3. Prime the joint surfaces as recommended in substrate preparation. Note Avoid excessive application of primer to avoid causing puddles at the base of the joint.
4. Open the seal on the top of the cartridge, or open the end of the foil pack. Fit the nozzle and cut it to the desired size. Insert the product into the caulking gun.
5. Apply the Product into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.
6. **IMPORTANT** Do not use tooling products containing solvents. As soon as possible after application, tool the sealant firmly against the joint sides to ensure adequate adhesion and a smooth finish. Use a compatible tooling agent such as Sika® Tooling Agent N to smooth the joint surface.
7. Remove the tape within the skinning time of the Product after finishing.

#### **Colour variation**

Note: Colour variations may occur due to the exposure in service to chemicals, high temperatures or UV-radiation, especially with white colour shade. This effect is aesthetic and does not adversely influence the technical performance or durability of the product.

## CLEANING OF TOOLS

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.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## 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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#### **Product Data Sheet**

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