

PRODUCT DATA SHEET

Sikaflex®-470

(formerly MSeal 470)

High performance, elastomeric, polysulphide joint sealant available in non-sag or pourable grades

DESCRIPTION

Sikaflex®-470 is a high grade, chemically curing, two-component polysulphide based sealant that forms a tough, flexible, durable, rubber like material which adheres to most common construction surfaces and provides fully waterproof seals in joints subject to a high degree of deformation or continuous cyclic movement.

The product is supplied in two version:

- Gun grade (GG) is a non-sag version for sealing vertical and overhead joints and for general application.
- Pouring grade (PG) is for sealing horizontal joints.

USES

Sikaflex®-470 is used in joints in critical situations in many types of buildings and structures:

- Bridges, tunnels and other civil engineering structures
- Precast concrete paneling, and high-rise buildings
- Concrete and brick foundations, retaining walls and bridge abutments
- Reservoirs, water treatment works, sea walls and roads
- Secondary containment areas
- Wet areas such as kitchens, laundries, bathrooms and showers, beneath tiles
- Terraces, decks and balconies
- Floor joints subject to heavy usage and traffic
- Industrial areas and those subject to chemical spillage
- Remedial repairs to asphalt, concrete, fiber
- Reinforced cement or similar slab surface
- As a bolt hole sealant for the WABO®FLEX REJ / WABO®FLEX SR expansion joints

CHARACTERISTICS / ADVANTAGES

- Forms a tough, flexible, elastomeric, weatherproof seal
- Excellent resistance to deterioration due to weathering, ozone, UV light
- Excellent chemical resistance
- Durable weather proof sealing even in joints with high levels of deformation (M.A.F. 25%) or repeated cyclic movement of compression and extension over a wide temperature range
- Excellent storage stability of base and curing agent ensures excellent shelf life
- Excellent adhesion to concrete, brickwork, metal, tiling, masonry, stone, steel and glass (check need for primer)
- Lead free curing compounds ensure that the product is safe for handling and application
- Gun grade (GG) has a single container packaging eliminating mistakes in mix ratios
- Can be used with lubricating oils and Hydrocarbon as per BS 5212
- Suitable to be used in potable water

APPROVALS / CERTIFICATES

- PG (pouring grade): ASTM C920, Type M, Grade P, Class 25, Use T, M and O
- GG (gun grade): ASTM C920, Type M, Grade NS, Class 25, Use T, M and O
- Complies to BS 5212: Part 1: 1990
- GG (gun grade): BS EN ISO 11600, Type F, Class 25LM

PRODUCT INFORMATION

| | | |
|--|---|---|
| Packaging | Gun grade (GG) | Pouring grade (PG) |
| | Ready to mix packing 4 L (Comp. A + Comp. B) | Ready to mix packing 5 L (Comp. A + Comp. B) |
| (Confirm the local available packing and adjust in Child PDS) | | |
| Shelf life | 12 months from production date | |
| Storage conditions | Sikaflex®-470 shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +25 °C. | |
| Colour | Black and grey | |
| Density | ~1.60 kg/l (25°C) | |
| Viscosity | Gun grade (GG) | Pouring grade (PG) |
| | Thixotropic paste | Pourable liquid |
| Volatile organic compound (VOC) content | ≤ 60 g/l | |

TECHNICAL INFORMATION

| | | |
|---------------------|---|---------------------------|
| Shore A hardness | Gun grade (GG) | Pouring grade (PG) |
| | ~25 | ~15 |
| Chemical resistance | Resistant to many chemicals, contact Sika Technical Department for details. | |
| Joint design | Joint configuration Minimum Joint width: 6 mm Maximum Joint width: 50 mm | |

Width: Depth Ratio

The joint width must be designed to suit the movement capability of the sealant. For movement joints, a width to depth ratio of approximately 2 : 1 must be maintained. For butt joint the width to depth ratio should be 1 : 1.

Minimum joint depth is recommended:

- 6 mm for non-porous surfaces
- 10 mm for porous surfaces
- 20 mm for trafficked joints and joints that are exposed to hydrostatic pressure

At chamfered elements, don't fill the chamfer with sealant.

APPLICATION INFORMATION

| | | |
|-------------------------|---|--|
| Ambient air temperature | +5°C to +45°C, min. 3°C above dew point temperature | |
| Substrate temperature | +5°C to +45°C | |
| Curing time | Initial cure time for light traffic | Final cure for chemical attack or water immersion |
| | ~24 h (at 25°C) ~5 h (at 40°C) | ~14 days (at 25°C) ~7 days (at 40°C) |

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.
- Internal Reference - Version: MBS_CC-UAE/SI_GG-PG470_12_19/v7/08_20/v8/11_20/v9/04_22

FURTHER INFORMATION

Method Statement

IMPORTANT CONSIDERATIONS

- Sikaflex®-470 Must be fully cured before permanent immersion in water.
- Joints subject to total immersion should have a 1:1 (width to depth) ration.
- Joints should be designed so total movement does not exceed the $\pm 25\%$ related to the joint width.
- When using filler boards in expansion joints to achieve the correct depth, it is essential to use a backer rod or insert a bond breaking tape into the joint in order to prevent 3-side adhesion.
- Paint compatibility with sealant should be checked prior to painting.

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.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

- All surfaces must be clean, dry and free from any loosely adhering particles.
- Check the joints edges for soundness and if found weak cut recess and fill up with suitable repair mortar.
- Correct joint depth can be established by inserting closed cell polyethylene backing rod tightly into the joint.
- When the joints have been filled with fiber filled board, this must be raked back to the required depth. Use bond breaker tape over the backer material.
- Protect surfaces with masking tape.

Concrete and Masonry

- Surfaces must be clean and dry.
- Wire brush thoroughly and remove dust and all contaminants.

Metals

- Remove any corrosion or millscale by grit or shot-blast, wirebrush, grinder or chemical remover.
- De-grease the surfaces with clean cloths soaked in oil-free cleansing solvent.

Wood (bare)

- Wood surfaces must be clean and dry, cut back or abrade where necessary to sound timber.

Glass and glazed materials

- Thoroughly clean the surfaces with clean cloths soaked in oil-free cleansing solvent.

Coating surfaces

- Coating should be removed and the surfaces treated as above.

Priming

- Application of Sika® Primer-101 should not be carried out below 5°C.
- A single coat of primer should be applied by brush in accordance with the instructions on the primer tins.
- Sika® Primer-101 must be allowed to dry to a tack free state before applying Sikaflex®-470.
- Sikaflex®-470 should be applied within 3 hours of primer, otherwise repriming will be necessary.

MIXING

- Mix and use one complete unit at a time. Do not subdivide.
- Gun grade (GG) is supplied with base and catalyst in the same single container.
- Pouring grade (PG) is supplied in separate base and catalyst units. Sometimes slight settlement may occur in the catalyst, mix well, before adding to the base component.
- Mix curing agent with base material for 5 - 10 minutes using a suitable paddle fitted to a 500 rpm electric drill moving the paddle completely through the mass of the material.
- The sides and base of the container should be periodically scraped down with a palette knife to ensure all of the catalyst is completely blended with the base component.
- Failure to mix correctly will result in uncured sealant.
- Once mixed Sikaflex®-470 should be used immediately.

APPLICATION

Gun grade (GG)

- Where required, protect the surface with masking tape.
- Sealant is formulated to be applied using a sealant gun but may be applied by trowel if required.
- Sealant guns are fitted with conical nozzles which can be cut to suit the joint width.
- The sealant should be gunned into the joint using an even trigger pressure, cleaning the nozzle occasionally to avoid contamination.
- Deep joints should be filled in two or more runs, to prevent air entrapment.
- When applying the sealant to a vertical joint, start application at the bottom of the joint so as to continuously support the sealant.
- Applied sealant should be tooled to a smooth finish.
- A minimum of surface lubricant such as dilute soap solution may be used to assist the process.
- Any masking tape should be removed immediately after tooling.

Puring grade (PG)

- Where required, protect the surface with masking tape.
- Sealant has a suitable consistency to be poured directly from the container into the joint, when thoroughly mixed.
- For very narrow joints, it should be filled into a sealant gun.
- Any masking tape should be removed immediately after tooling.

CLEANING OF EQUIPMENT

- Application equipment should be cleaned immediately with Sika® Colma Cleaner, acetone or any suitable cleaning solvent after use.
- Hardened / cured material can only be mechanically removed.

LOCAL RESTRICTIONS

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

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