

PRODUCT DATA SHEET

Sikaflex® GG 477

(formerly MSeal GG 477)

High performance, gun grade, elastomeric polysulphide joint sealant

DESCRIPTION

Sikaflex® GG 477 is a two-part polysulphide sealant, consisting of a polysulphide polymer with selected additives and a curing agent, which when mixed homogeneously cure to a tough, durable, flexible rubber like material with strong adhesion to common construction materials. Sikaflex® GG 477 has outstanding resistance to deterioration due to weathering, ozone, ultraviolet light and attack by chemicals present in industrial atmospheres. It has ability to withstand repeated cycles of compression and extension over a wide temperature range, and has excellent adhesion properties to all materials commonly employed in building construction work.

Sikaflex® GG 477 gun grade (GG) is primarily used for sealing vertical joints where movement is expected, or where the performance specification is too rigorous for most common mastic and joint sealants. It is ideal for use in expansion joints in reinforced concrete structures

USES

- Residential and commercial buildings
- Curtain walls, precast concrete panelling.
- Factories and warehouses.
- Dams, reservoirs and water treatment plants, sewage treatment plants, etc
- Subways, bridges, culverts and rigid pavements of highways, airport runways etc
- It is suitable for sealing joints subjected to vehicular traffic and is chemically resistant to water, fuels, oils and solvents

CHARACTERISTICS / ADVANTAGES

- Durable in exposed conditions.
- Good chemical resistance
- Flame and fuel resistant
- High movement accommodation.
- Tough and flexible – withstands traffic.
- Excellent adhesion to a variety of substrates.
- Forms watertight seal

APPROVALS / STANDARDS

Conforms to IS:12118, BS 4254, BS 5212, ASTM C920

PRODUCT INFORMATION

Chemical base	Cross linking polysulphide
Packaging	Sikaflex® GG 477 is supplied in 4 Kg & 32 Kg system packs (Part A & Part B are placed in the same system pack)
Shelf life	12 months in unopened condition from the date of production
Storage conditions	Store properly in unopened, undamaged original packaging in cool and dry condition at temperature +5°C to + 25°C at a Relative Humidity of 50%
Colour	Grey viscous paste
Density	1.6 -1.65 kg/litre

Solid content by weight > 99%

TECHNICAL INFORMATION

Shore A hardness	25 at 25° C (Full cure)
Movement capability	25 ± 2 % (Movement Accomodation Factor)
Chemical resistance	Excellent
Joint design	<p>Joint size may range from a minimum of 5 mm to a maximum of 40 mm width. Joints with cyclic movements should have a width: depth ratio of 2:1 and designed so total movement does not exceed the 25% M.A.F (Movement Accomodation Factor) related to the joint width. Sealant depth shall not exceed joint width.</p> <p>Minimum sealant depth recommended:</p> <ul style="list-style-type: none">▪ 6 mm for metals, glass and other impervious surfaces.▪ 10 mm for all porous surfaces.▪ 20 mm for joints exposed to hydrostatic pressures.▪ 6 mm below flush for joints exposed to traffic. <p>Design to appropriate width based on the purpose of joint provision, anticipated movements, the traffic and other mechanical loads the sealant is likely to be subject to. Movement joints should be formed through the entire thickness of the substrate with minimum 10 mm width.</p>

APPLICATION INFORMATION

Consumption	<p>Primer : A suitable Sika® Primer, approx coverage is 12 to 25 running meter of sealing per 250 ml</p> <p>Sikaflex® GG 477:As per the table below :</p> <table><thead><tr><th>Coverage in rm of sealant per kg</th><th colspan="5">Width of joint (mm)</th></tr><tr><th>Depth of sealant (mm)</th><th>10</th><th>15</th><th>20</th><th>25</th><th>30</th></tr></thead><tbody><tr><td>10</td><td>10</td><td>6.7</td><td>5</td><td>4</td><td>3.33</td></tr><tr><td>15</td><td>x</td><td>4.45</td><td>3.33</td><td>2.67</td><td>2.23</td></tr><tr><td>20</td><td>x</td><td>x</td><td>2.5</td><td>2</td><td>1.67</td></tr><tr><td>25</td><td>x</td><td>x</td><td>x</td><td>1.6</td><td>1.33</td></tr></tbody></table>						Coverage in rm of sealant per kg	Width of joint (mm)					Depth of sealant (mm)	10	15	20	25	30	10	10	6.7	5	4	3.33	15	x	4.45	3.33	2.67	2.23	20	x	x	2.5	2	1.67	25	x	x	x	1.6	1.33
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Ambient air temperature	+ 5°C min. / + 45°C max																																									
Substrate temperature	+ 5°C min. / + 45°C max																																									
Pot life	≈ 60 minutes at 40°C ,≈ 120 minutes at 25°C																																									
Curing time	Type Of Curing		Minimum Time Required																																							
	Sufficient curing to gain handling strength (Initial Set)		6 hrs at 40°C 24 hrs at 25°C																																							
	Total Cure for development of full properties		7 days at 40°C,14 days at 25°C																																							

BASIS OF PRODUCT DATA

based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

All technical data stated in this Product Data Sheet are

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

Joint surface preparation

Ensure joint is of uniform width throughout its length and its faces, flat. Joints should ideally be pre-formed or cut to the required width using a diamond saw to the full thickness of the substrate. Where necessary, re-profile the joint faces to obtain an even edge and a consistent joint width. As with all surface coating and sealants, proper surface preparation is vital to ensure the successful application and performance of

Sikaflex® GG 477. For practical reasons surface preparation methods will be limited to sandblasting and grinding. Wire brushing can be used but only where other methods are impracticable. Whatever method is used, it is vital to ensure that all surface contamination

is removed. Clean the joint faces free of curing membrane, oil, grease, dust and such other contaminants and allow drying. Ensure that metallic substrates are also being free from oxide films and protective lacquers. Insert closed cell polyethylene backer rod or strip snugly into the joint, taking care not to twist or deform it, to support the sealant. If any other type of backing has to be used, apply a bond breaker tape over its exposed surface. In existing joints, rake out the sealant and any backing material to the required depth. Mask the substrate surface adjacent to the joint using a masking tape for a neat and clean finish.

Priming

Prime joint faces using appropriate primer from Sika® Primer range for porous and moist substrates such as concrete, masonry .

Mixing

Sikaflex® GG 477 must be mixed mechanically, using a heavy-duty, slow speed mixer 300-500 rpm fitted with a sealant paddle. Transfer the entire curing agent into the polymer container and mix thoroughly for about 5 minutes, scraping the sides periodically, until a homogeneous mix free from grey or white streaks is obtained. Improper mixing results in patches of uncured sealant.

Application (Gun Grade)

Fill the mixed sealant into gun barrel using a specially designed follower plate, avoiding air pockets. Place a paper or a polythene disc separator between the mixed sealant and the follower plate. With the mouth of the barrel positioned over its central hole, press the follower plate down while withdrawing the plunger of the gun.

Tooling

Compact the sealant in the joint and finish the sealant surface slightly concave using a spatula or finger with rubber gloves dipped in soap water



Product Data Sheet

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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 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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