



# SIKA FIBRE SOLUTIONS

For economical slab on ground constructions

BUILDING TRUST

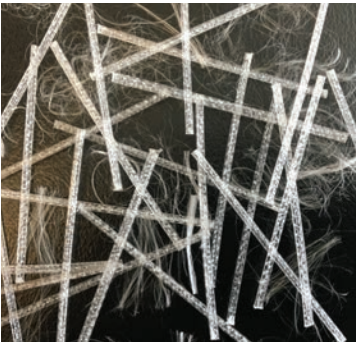


# TYPICAL SLAB THICKNESS AND FIBRE DOSAGES RATES TO FULFILL CRACK CONTROL REQUIREMENTS IN LIEU OF STEEL MESH

In today's construction market Fibre Reinforced Concrete is often the first-choice reinforcement for many important applications including slabs on ground or grounds, topping slabs, infills and shotcrete. It is often used as a cost-effective, easy-to-use alternative to traditional steel reinforcement, or to enhance other properties.

| Mesh Type AUS (500MPa) | Slab Thickness / (mm) | Max Joint spacing/ (m) | PPM48/19 Dosage / (kg/m³) | PP48/Rad 48s Dosage / (kg/m³) |
|------------------------|-----------------------|------------------------|---------------------------|-------------------------------|
| SL52                   | 75                    | 2.25                   | 4.6                       | 4.0                           |
|                        | 100                   | 3.00                   | 4.6                       | 4.0                           |
|                        | 125                   | 3.75                   | 4.6                       | 4.0                           |
| SL62                   | 100                   | 3.00                   | 5.75                      | 5.0                           |
|                        | 125                   | 3.75                   | 4.6                       | 4.0                           |
|                        | 150                   | 4.50                   | 4.6                       | 4.0                           |
| SL72                   | 125                   | 3.75                   | 6.9                       | 6.0                           |
|                        | 150                   | 4.50                   | 5.75                      | 5.0                           |
|                        | 175                   | 5.25                   | 4.6                       | 4.0                           |
| SL82                   | 150                   | 4.50                   | 6.9                       | 8.0                           |
|                        | 175                   | 5.25                   | 5.75                      | 6.0                           |
|                        | 200                   | 6.0                    | 4.6                       | 4.0                           |
| SL92                   | 150                   | 4.50                   | N/A                       | N/A                           |
|                        | 175                   | 5.25                   | N/A                       | 8.0                           |
|                        | 200                   | 6.00                   | 6.9                       | 7.0                           |

## TYPES OF FIBRES



**SikaFiber® PPM 48/19: Blended Polyolefin Macro/Micro Hybrid Synthetic fibre**  
**Item Code:** 478672  
**Packaging:** 2.3kg bags, 300 boxes per pallet



**SikaFiber® Force PP-48/RAD-48s Polyolefin Macro Synthetic Fibre**  
**Item Code:** 460696  
**Packaging:** 5kg bags, 200 boxes per pallet

## ADVANTAGES OF SYNTHETIC FIBRES OVER CONVENTIONAL WELDED WIRE MESH

- DURABLE:** No rusting of poly fibre hence no requirement of maintaining a minimum cover to reinforcement.
- SAFER:** No transportation, cutting, bending and fixing of steel hence reduce the injury risk of workers and public.
- EASY TO TRANSPORT:** No need of large trucks or trailers to move around as it comes in 2.3kg and 5kg small boxes.
- LESS LABOUR:** No cutting and fixing of steel hence less labour cost and faster to use.
- EASY DOSING:** No need of special dosing equipment hence fibre could be added at site or at ready-mix plant.
- EASY FINISHING:** No special tools required for finishing and could use conventional vibrating and finishing tools to place and finish the concrete.
- BETTER CRACK CONTROL:** Reduce incidents of plastic shrinkage and plastic settlement cracking.
- IMPROVED HARDENED STAGE PROPERTIES:** Improves impact resistance, abrasion resistance, shear strength and toughness of concrete.

## AREAS OF APPLICATION

- Ground supported slabs:** Domestic, industrial or commercial slabs, car parks, driveways, bikeways, walkways and footpaths.
- Topping slabs and repair works
  - Boat ramps, spillways and drainage channels
  - Precast and in situ concrete
  - Road kerbs and channels
  - Shotcrete: swimming pools, batter walls, spoon drains

## ASSUMPTIONS AND WORKING INSTRUCTIONS FOR FIBRE REINFORCEMENT COMPARED TO STEEL MESH

- PERFORMANCE:** The performance of fibre reinforcement may vary depending on the specific application, mix design, and environmental conditions. Users should conduct their own tests to determine the suitability of the product for their specific needs.
- DURABILITY:** While poly fibres do not rust, the overall durability of the concrete structure depends on various factors, including the quality of the concrete mix and environmental conditions.
- SAFETY:** The reduction in injury risk is based on the elimination of certain tasks associated with steel reinforcement. However, standard safety protocols should still be followed during the handling and application of fibre reinforcement.
- TRANSPORTATION AND LABOUR:** The ease of transportation and reduction in labour costs are general benefits and may vary depending on the scale and specifics of the project.
- CRACK CONTROL AND HARDENED PROPERTIES:** The improvement in crack control and hardened stage properties is based on typical performance characteristics of fibre-reinforced concrete. Actual performance may vary depending on the specific mix design and application.
- TESTING AND COMPLIANCE:** All claims regarding the performance of fibre reinforcement are based on compliance with relevant standards, including EN 14889-2, ASTM C1116/C1116M and ACI 544.4R. Users should ensure that their application meets these standards.
- EASY FINISHING:** While conventional tools can be used, the finishing process may require adjustments based on the specific characteristics of the fibre-reinforced concrete. It is recommended to conduct a trial application to determine the best finishing practices.

The information, and the recommendations relating to the application and end-use of Sika's 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 practice, the differences in materials, ground conditions, substrates, loadings 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Product Data Sheet for the product concerned, copies of which will be supplied on request. PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

## SUPPORTING PRODUCTS

**Sika® WT- 200P**

Water resisting and crystalline waterproofing concrete admixture used to reduce the permeability of concrete and to enhance the self-healing abilities of the concrete.

**Item code:**  
**5488827 10.5 kg**

**Sika® Film**

Evaporation control and finishing aid liquid concentrate which controls the moisture evaporation from the freshly cast concrete flatwork surface in addition to functioning as a finishing aid.

**Item code:**  
**493033 10 L**

**Sika® Antisol-15 SF**

Water-based acrylic membrane that protects concrete from loss of water during the early stage of concrete curing, eliminates dusting and promotes surface hardening of concrete.

**Item code:**  
**840530 10 L**

**Sika® Rugasol C and MH**

Concrete surface retarder that dries forming a tough, water-insoluble, abrasion resistant film for horizontal and vertical construction joints and surfaces.

**Item code:**  
**480621 5 L Rugasol C**  
**493043 10 L Rugasol C**  
**493092 10 L Rugasol MH**

**Sikafloor® CureHard-24**

Sodium silicate, water based transparent surface hardener, dust proofer, densifier and impregnating sealer for fresh or hardened concrete.

**Item code:**  
**480474 5 L**  
**412200 10 L**

**Sikaflex® Pro-3 Purform**

One-component, moisture-curing, PU technology, elastic joint sealant with high mechanical and chemical resistance for construction and movement joints in concrete.

**Item code:**  
**617759 600 ml SSC**



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## WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, flooring as well as roofing and waterproofing systems.

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