

FM APPROVALS FOR SIKA ROOFING SYSTEMS

FACTORY MUTUAL APPROVALS - SIKA ROOFING SYSTEMS - SINCE 1995



SIKA ROOFING SYSTEMS WITH FM APPROVALS TESTING AND CERTIFICATION

WHO ARE EM GLOBAL AND WHAT ARE EM APPROVALS?

FM Global (Factory Mutual) provides comprehensive global commercial and industrial property insurance, engineering-driven underwriting and risk management solutions, plus innovative property loss prevention research and risk management. (www.fmglobal. com)

At its research and testing center - unique in the world – the causes of property damage and methods of damage prevention are examined under realistic site conditions, including the assessment of the effects of fire, wind, rain and other natural forces, plus explosions and the engineered protection systems for these.

Its subsidiary FM Approvals tests and certifies products and systems for property damage prevention to the highest performance, quality and safety standards.

Roofing products are covered by FM Approvals standard 4470, which is becoming increasingly important and



recognized around the world, specifically now in Europe. Many more investors and building owners are requesting and obtaining FM Approvals Certificates on

the systems used on their buildings for the preventive protection of their business against natural forces and fire.

FM APPROVALS CERTIFIED SIKA ROOFING SYSTEMS

Many Sika roof waterproofing products and systems have passed testing and inspection by FM Approvals since 1995. The products listed here are those currently tested and certified in different roof build-ups and combinations, and including different types of insulation from three different manufacturers in Europe. In addition to the strict and demanding FM Approvals criteria, all of these Sika roofing systems fully comply with all other relevant national and international requirements and standards.





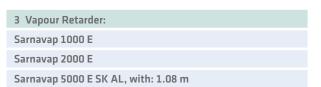
The exact combinations of Sika roofing system build-ups tested are shown in the following tables which are also available from your local Sika Technical Services. The tables also contain details of the additional installation requirements, including pitch and fastening systems etc..

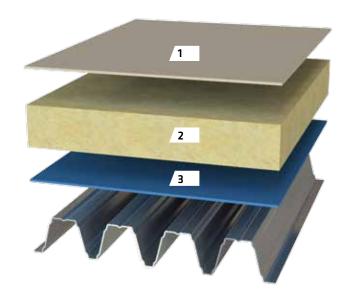
Sarnafil® - TESTED AND APPROVED SYSTEMS (FPO BASED MEMBRANES):

| 1 Samani waterproofing membrane (FPO) for mechanically | / |
|--|---|
| fastened roofing systems: | |
| Sarnafil® TS 77-12 / Sarnafil® TS 77-12E | |

Sarnafil® TS 77-15 / Sarnafil® TS 77-15E
Sarnafil® TS 77-18 / Sarnafil® TS 77-18E
Sarnafil® TS 77-20 / Sarnafil® TS 77-20E

| 2 Thermal insulation: | | |
|-----------------------|--------------------|--------------|
| Sika | Sikatherm PIR AL | PUR/PIR |
| | Sikatherm PIR GT | |
| Recticel NV | Powerdeck | |
| Kingspan (Ltd.) | Thermaroof TR26 FM | |
| | Thermaroof TR27 FM | |
| Rockwool GmbH | Hardrock | Mineral wool |
| | Durock | |







APPROVED SYSTEMS (PVC BASED MEMBRANES):

1 Sarnafil® waterproofing membrane (PVC) for mechanically fastened roofing systems:

Sarnafil® S 327-12EL

Sarnafil® S 327-15EL

Sarnafil® S 327-18EL

1 Sikaplan® waterproofing membrane (PVC) for mechanically fastened roofing systems:

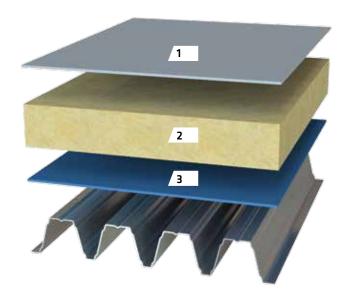
Sikaplan® 12 G / Sikaplan® 12 VG

Sikaplan[®] 15 G / Sikaplan[®] 15 VG

Sikaplan® 18 G / Sikaplan® 18 VG

Sikaplan® 20 G / Sikaplan® 20 VG

| | 2 Thermal insulati | on: | |
|--|--------------------|--------------------|--------------|
| | Sika | Sikatherm PIR AL | PUR/PIR |
| | | Sikatherm PIR GT | |
| | Recticel NV | Powerdeck | |
| | Kingspan (Ltd.) | Thermaroof TR26 FM | |
| | | Thermaroof TR27 FM | |
| | Rockwool GmbH | Hardrock | Mineral wool |
| | | Durock | |



| 3 Vapour Retarder: |
|-------------------------------------|
| Sarnavap 500 E |
| Sarnavap 1000 E |
| Sarnavap 2000 E |
| Sarnavap 5000 E SA FR, with: 1.08 m |



WHAT IS TESTED?



1. WIND UPLIFT TESTING

Simulated wind uplift forces as well as testing of the pull-off strength and impact resistance for relevant fastening components to verify the wind uplift security of Sika roofing systems



4. HAILSTONE DAMAGE TESTING

Simulated hail storms are used to verify the hailstone impact resistance of the Sika roofing systems



2. INTERNAL FIRE TESTING

Cone calorimeter testing to assess the behaviour in fire of the roof structure in relation to ignitability, combustibility, and the production of smoke and toxic gases



5. WATERTIGHTNESS - LEAK TESTING

Artificial weathering and liquid water resistance testing to verify the outstanding watertightness of Sika roofing systems



3. EXTERNAL FIRE TESTING

Physically testing the flammability and flame propagation of the materials to verify the fire resistance of Sika roofing systems



6. FOOT TRAFFIC TESTING

Physical and simulated walking and load testing to verify the pedestrian and traffic resistance of Sika roofing systems



7. TEAR RESISTANCE TESTING

Testing the fixings and fasteners to verify the pull-out strength and tear resistance of Sika roofing systems



8. CORROSION TESTING

Testing the fixings and fasteners to verify the corrosion resistance and durability of Sika roofing systems

GLOBAL BUT LOCAL PARTNERSHIP



WHO WE ARE

Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, façades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika's product lines feature highquality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the Data Sheet prior to any use and processing.









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