PRODUCT DATA SHEET

SiMP® SEAL 25 HM

Version, Penetron Hellas 20.01.2023

ONE-PART SiMP HIGH MODULUS CONSTRUCTION SEALANT

DESCRIPTION

SiMP® SEAL 25 HM is a one-component, gun-grade, non-sag SiMP - Silyl Modified Polymer high modulus construction sealant. It cures under the influence of atmospheric moisture to form a high-performance compound with permanent elasticity and high resistance to ageing and weathering. Solvent- and isocyanate-free.

RECOMMENDED FOR

SiMP® SEAL 25 HM is a versatile and performant construction sealant for:

- Expansion and construction joints in vertical and horizontal applications
- Sealing and bonding between different materials
- External walling and cladding joints
- Metal roof and gutter sealing,
- Bridge and balcony parapets
- Weatherproofing of joints between brickwork, blockwork, masonry, wood, concrete, metal, window or door frames

It is suitable for a wide range of materials such as:

- Metals
- Sheet steel (galvanized, plated and painted)
- Untreated or anodized aluminum
- Brass
- Copper
- Glass
- Wood
- Concrete
- Many rigid plastics
- Wall joints
- Connecting joints in sheet metal fabrication and duct-work

ADVANTAGES

- Environmentally friendly – Free of isocyanates and solvents
- No Hazard symbol required
- No bubble formation – Odorless
- Bonds and seals at the at the same time
- Permanently elastic; Accommodates joint movement of ± 20%
- Easy to gun with excellent tooling consistency
- Exceptional thixotropy, non-sagging, short cut-off string
- Excellent primerless adhesion om all typical construction and industrial materials
- Non-staining on concrete and porous materials
- Excellent resistance to ageing and weathering
- Over-paintable with many water and solvent based paints (preliminary tests recommended)

TECHNICAL CHARACTERISTICS

Characteristics	Test Result	Test Method
Appearance	Non-sag thixotropic paste	
Color	Grey, white, black. Special colors on request	
Chemical nature	SiMP Silyl-Modified Polymer	
Curing mechanism	Moisture-curing	
Curing through volume	~ 2,0 mm	At 23 ºC (73,4 ºF) and RH 50%
Shore A hardness	~ 28	DIN 53505
Density	~ 1,51 g/cm³ (94,27 lb/ft^3)	At 23 ºC (73,4 ºF) and RH 50%
Tack-free time	~ 50 min	At 23 ºC (73,4 ºF) and RH 50%
Elastic modulus at 100%	~ 0,6 N/mm^2	ISO 37 DIN 53504
Tensile strength	~ 1,6 N/mm^2	ISO 37 DIN 53504
Elongation at break	~ 460%	ISO 37 DIN 53504
Joint Movement Capability	± 20 % of joint width	EN 15651/1; ISO 11600
Application temperature	5 to 40 ºC (41 to 104 ºF)	
Temperature resistance	-40 to 100 ºC (-40 to 212 ºF) with brief points at 120 (248 ºF)	

Note: All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

DIRECTIONS FOR USE

Surface Preparation: The surfaces to be treated should be perfectly clean, dry and free from dust and grease. SiMP®-SEAL 25 HM has very good adhesion properties without the use of primer on most common building materials. Consequently, the use of the primer is not necessary if the support to be sealed is properly prepared and consolidated. However, varieties of brick, natural stone, plastics, paints, coatings and other treatments of surfaces often presents a difficult surface to which to adhere. Due to the number of unpredictable natures of these substrates, a preliminary test is recommended. Pre-cast panels using form-release agents other than polyethylene film must be sandblasted or mechanically abraded and dust free. The substrates must be prepared in accordance with the PENETRON HELLAS S.A. instructions. Contact PENETRON HELLAS S.A. for further recommendations and guidance regarding adhesion on specific surfaces.

Application: Recommended application temperatures: 15°-25°C (59 – 77 ºF). For easier use or cold weather application we recommend the material to be stored at approximately 25°C (77 ºF) prior to use. In order to guarantee free movement of the sealant in joints, it is imperative that the sealant does not adhere to the bottom of the joint, therefore for correct joint caulking, a closed-cell polyethylene bead (joint backing rod) PENETRON® BACKING ROD of suitable diameter is to be placed at the proper depth. Apply appropriate primer, if needed, to joint sides and observe the waiting time to avoid that any trapped solvent can form bubbles in the uncured sealant, due to rising temperatures. Screw on the plastic nozzle and cut it at an angle according to the desired bead thickness and profile. Fit the cartridge into a manual or pneumatic air operated gun (provided with telescopic piston) and extrude the SiMP® SEAL 25 HM carefully, preventing air entrapment. Firmly extrude SiMP® SEAL 25 HM and apply in the joint, making sure that it is in full contact with the sides of the joint and with the backing rod at the bottom. Keep the nozzle in the SiMP® SEAL 25 HM, continue on with a steady flow of sealant preceding the nozzle to avoid air entrapment. Avoid overlapping of sealant to eliminate entrapment of air. SiMP® SEAL 25 HM should be tooled to a smooth finish, ensuring a full contact to the sides and back up material into the joint. This will also contribute in breaking the air bubbles, which may be formed inside the sealant. Masking tape should be used, where sharp exact joint lines or exceptionally neat lines are required. Remove the tape, while the sealant is still soft.

For adhesive purposes: Apply SiMP® SEAL 25 HM in spots or bead on the prepared surfaces then firmly press the parts which have to be bonded together.

Finishing indications and limitations: Tooling and finishing must be carried out within the tack-free time of the sealant. SiMP® SEAL 25 HM can be over-painted. The paint must be tested for compatibility with SiMP® SEAL 25 HM by carrying out preliminary trials. Attention must be observed with the use of alcohol or alkyd-resin since they may interfere with the curing process of the sealant and reduce the drying time of the paint itself. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the paint film. Avoid exposure to high levels of chlorine (avoid sealing joints in chlorinated swimming pools). Do not cure in the presence of curing silicone sealants. Avoid contact with alcohol and other solvent cleaners during cure. When applying SiMP® SEAL 25 HM, avoid air-entrapment. Since system is moisture-cured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period.

Coverage 6 linear meters of 1x1 cm joint per 600 ml unipack seals or 3 linear meters of 1x1 cm joint per 290 ml cartridge.

SPECIAL CONSIDERATIONS

SiMP® SEAL 25 HM presents long term resistance to fresh water, seawater, limewater, caustic solutions and cleaning agents. Short term resistance to Petrol, grease and mineral

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oil. Not resistant to organic acids, concentrated mineral acids or solvents.

Do not use SiMP® SEAL 25 HM on bituminous substrates, natural rubber, EPDM rubber or on building materials which might bleed oils, plasticizers or solvents which could attack the sealant.

This information is offered for general guidance only. Advice on specific applications will be given on request.

Once opened, packs should be used up within a relatively short time.

Clean tools with acetone or alcohol immediately after use.

Cured material can only be removed mechanically.

Contact PENETRON HELLAS S.A. for additional information, regarding your project.

PACKAGING

SiMP® SEAL 25 HM can be purchased in cartridges of 290 mL (18 in^3) (12 pieces per box) or unipacks of 600 mL (37 in^3) (20 pieces per box).

STORAGE / SHELF LIFE

SiMP® SEAL 25 HM can be stored for 12 months in its original packaging (unopened container) at 10°C - 25°C (50 ºF - 77 ºF) in a cool, dry place. The storage temperature should not exceed 25°C (77 ºF) for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

SAFE HANDLING INFORMATION

Avoid skin contact by using latex, rubber or polyethylene gloves. Avoid skin and eye contact. If in eye, flush immediately with lots of water and seek medical advice. If skin contact occurs, remove immediately and wash with soap and water. KEEP OUT OF REACH OF CHILDREN. For further information please refer to Safety Data Sheet. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers.

CERTIFICATION

Certified according to:
EN 15651-1/3/4 TYPE F INT-EXT/ XS3/ PW EXT-INT CC
EMICODE EC1PLUS protocol
EUROFINS IAC GOLD protocol
VOC Emission class label A+

Compliant to:
ISO 11600 Type F Class 20 sub-class HM
LEED iEQc 4.1; SCAQMD Rule 1168; BAAQMD Reg 8 Rule 51

CE

2538
EN 15651-1
EN 15651-3
EN 15651-4
NPT srl
Via G.Rossa 2
Loc. Crespellano – 40053 Valsamoggia (BO)
Italy
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SIMP® SEAL 25 HM
One component methoxy-silane based
for the application in façade, sanitary joints and pedestrian walkways
Type F EXT-INT/PW INT -EXT/XS3 CC
Conditioning: Method A
Substrate: mortar M1
Pre – treatment with U-Primer 110 (mortar)
Reaction to fire: Class E
Release of chemicals dangerous to the environment and health: NPD
Water tightness and air tightness
a) Resistance to flow: ≤ 3 mm
b) Loss of volume: ≤ 10%
c) Tensile properties at maintained extension after water immersion: Not failure
d) Tensile properties at maintained extension: Not failure
e) Tensile properties at maintained extension at -30ºC: Not failure
f) Adhesion/cohesion properties at mainted extension after 28days water immersion: Not failure
g) Adhesion/cohesion properties at mainted extension after 28days salt water immersion: Not failure
h) Tear resistance: Not failure
i) Durability: Pass
j) Microbiological growth: 4

WARRANTY - DISCLAIMER

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