PRODUCT DATA SHEET

SiMP® CLEAR

Version, Penetron Hellas 20.01.2023

ONE-PART SiMP® CLEAR ELATIC ADHESIVE AND SEALANT

DESCRIPTION

SiMP® CLEAR is a one-component, gun-grade, non-sag SiMP – Silyl Modified Polymer clear elastic adhesive and 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® CLEAR is a versatile and performant clear adhesive and sealant for different applications in:

- House interior fitting
- Construction finishing
- Furniture and industrial assembly where a clear bond or seal is necessary

Suitable for transparent elastic bonding between metal, plastic, glass and other materials, joints between window or door frames, mirror and glass assembly.

Suitable for indoor and outdoor bonding. Suitable for indoor sealing only. With prolonged UV radiation products can discolor and become less UV stable

ADVANTAGES

- Clear transparency
- 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
- Easy to gun with excellent tooling consistency
- Exceptional thixotropy, non-sagging, short cut-off string
- No change in volume, no shrinkage
- Good primerless adhesion on all typical construction and industrial materials
- Non-staining on concrete and porous materials

TECHNICAL CHARACTERISTICS

Characteristics	Test Result	Test Method
Appearance	Non-sag thixotropic paste	
Color	Clear	
Chemical nature	SiMP Silyl-Modified Polymer	
Curing mechanism	Moisture-curing	
Curing through volume	~ 3,0 mm	At 23 °C (73,4 °F) and RH 50%
Shore A hardness	~ 44	DIN 53505
Density	~ 1,07 g/cm³ (66,80 lb/ft^3)	At 23 °C (73,4 °F) and RH 50%
Tack-free time	~ 45 min	At 23 °C (73,4 °F) and RH 50%
Elastic modulus at 100%	~ 1,6 N/mm^2	ISO 37 DIN 53504
Tensile strength	~ 2.9 N/mm^2	ISO 37 DIN 53504
Elongation at break	~ 220%	ISO 37 DIN 53504
Application temperature	5 to 40 °C (41 to 104 °F)	
Temperature resistance	-40 to 100 °C (-40 to 212 °F) with brief points at 120 (248 °F)	

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: Surfaces must be clean, dry, free of water, oil, grease or rust and of sound quality. Remove all loose particles or residues with a jet of compressed air, sandpaper or hard brush. Glass, metal and other non-porous surfaces must be free of any coatings and wiped clean with solvent (indicatively, use of ACTIVATOR 400 NP with fabric). Pre-cast panels, using form-release agents other than polyethylene film, must be sandblasted or mechanically abraded and dust free. Pre-test substrates for adhesion. Cleaners and/or primers may be required to achieve optimal adhesion. The substrates must be prepared, in accordance with the PENETRON HELLAS S.A. instructions. Contact PENETRON HELLAS S.A. or 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® CLEAR carefully, preventing air entrapment. Firmly extrude SiMP® CLEAR 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® CLEAR, 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® CLEAR 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.

Finishing indications and limitations: Tooling and finishing must be carried out within the tack-free time of the sealant. SiMP® CLEAR can be over-painted. The paint must be tested for compatibility with SiMP® CLEAR 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. Do not cure in the presence of curing silicone sealants. Avoid contact with solvent cleaners during cure. When applying SiMP® CLEAR, 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 1 x 1 cm joint per 600 mL cartridge.

SPECIAL CONSIDERATIONS

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® CLEAR can be purchased in cartridges of 290 mL (18 in^3) (12 pieces per box) and unipacks of 600 mL (37 in^3) (20 pieces per box).

STORAGE / SHELF LIFE

SiMP® CLEAR 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.

WARRANTY - DISCLAIMER

PENETRON HELLAS S.A. warrants that its products are manufactured under certified ISO Standard procedures, are of excellent quality and shall be free from material defects and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON HELLAS S.A. shall be limited to replacement of the material proven to be defective, since the standard application procedures have been met and the suitability of the product for the particular application have been proven. PENETRON HELLAS S.A. makes

no warranty as to merchantability of fitness for a particular purpose. User, after contacting the distributor of the product, shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. While every care has been taken, the information provided in this product's data sheet make no part of any contract. All recommendations, technical data and test data contained in this product's data sheet are based upon the results of control laboratory tests or in actual field tests. However, PENETRON HELLAS S.A. makes no warranty of any kind, concerning this data. In any case, this data is given in good faith based in the PENETRON HELLAS S.A. experience, till the publication of this sheet. Due to variance in storage, handling and applications of the materials, PENETRON HELLAS S.A. accepts no liability for the results obtained. It is suggested that potential users try small applications to determine the suitability of each individual product for their specific requirements. The users should always refer to the most recent edition of the product's data sheet. PENETRON HELLAS S.A. may particularly differentiate its versions of the product's data sheet compared with those of PENETRON INTERNATIONAL LTD or respective PENETRON companies worldwide. These changes are due to text formatting, different application weathering and procedures or different product names and aim at the optimal consumer information.

CERTIFICATION

Certified according to:
EN 15651-1/3/4 TYPE F INT-EXT
EMICODE EC1^{PLUS} protocol
EUROFINS IAC GOLD protocol
VOC Emission class label A+

Compliant to:
LEED iEQc 4.1; SCAQMD Rule 1168; BAAQMD Reg 8 Rule 51
CARB VOC levels regulation

CE

0757
EN 15651-1
NPT srl
Via G.Rossa 2
Loc. Crespellano – 40053 Valsamoggia (BO)
Italy
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SIMP® CLEAR
One component MS hybrid polymer
for the application in facades
Type F INT
Conditioning : Method B
Substrate : anodised aluminium and mortar M1
Pre – treatment with U-Cleaner/Activator (aluminium) and U-Primer 110 (mortar)
Reaction to fire: Class E
Release of chemicals dangerous to the environment and health: Evaluated
Water tightness and air tightness
a) Resistance to flow: ≤ 5 mm
b) Loss of volume: ≤ 45%
c) Tensile properties at maintained extension after water immersion: NPD
d) Tensile properties at maintained extension: NPD
e) Tensile properties at maintained extension at -30ºC: NPD
f) Tensile properties (secant modulus/elongation at break): ≥ 25%
g) Tensile properties (secant modulus) at -30ºC: NPD
h) Durability: Pass

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