

PST System

Main characteristics (technical specifications)

The PST system is a fire-retarding system to protect walls and structure. It consists of an insulating coat and a hardening agent.

The fire delay of the system is based on two superposing phenomena:

- o The thermal conductivity factor of the coat has an insulating effect. The coat is stable beyond 1300°C and releases no toxic fume.
- o The hardening agent vitrifies from 800 °C and provides a stable screen beyond 1400°C which reflects a large part of the heat radiations.

Can be washed: ☐ Low/medium/high pressure

Can be painted: ☐

Information on the composition

Insulating coat: Cement, mineral hollow charges

Hardening agent: Steel particles and suspension agent

Fire Test reports (cross the relevant boxes)

ISO (1050°C 2h 1160°C 4h) ☐	HC (1100°C, ref. EC1.1.2) ☐	HCM (1300°C, HC*1300/100) ☐
RABT/ZTV (Germany) (1200°C) ☐	RWS (1350°C) ☐	Others : ☐

Characteristics of the tested samples, report number and possible comments:

- TNO tests under RWS curve (VSH report No.200110993). Fire protection 2h and 3h
- CTICM tests fire protection 2 h and 3 h (CTICM report No.97-U-473, 99-G-095, 00-G-344)
- CSTB tests fire protection 2 h (CSTB report No.RS98-201 1)

Application procedures

Board ☐ Mortar ☐

Insulating coat:

Grey powder, cement and minerals mixture

Mixing with 56% water

Application on clean support by wet spraying, no rebound loss

Thickness according to required protection, from 7 mm-50mm

Hardening agent:

Ready-to-use liquid, grey, opaque, aqueous medium, solvent-free

Proportioning 100 g.m⁻²

Application onto the insulating coat once hardened and dried, applied with brush, roll or gun.

Present application field

Walls and segments.

Gutters, inspection ports and wall panels.

Possible use in tunnels	Civil engineering works references
Wall, ceiling and vault Steel ribs Moulded products: gutters and ports, wall panels	
Physical and thermal data	
<u>Reaction to fire</u> (French/European classification): A1 <u>Main thermal data: (at 20°C and possibly variation with temperature)</u> - Thermal conductivity λ (W.m⁻¹.K⁻¹) = 0.13 à 25°C, 0.15 à 600°C 2 out of the 4 following values - Specific heat c (J. kg⁻¹.K⁻¹) = 1050 - Density ρ (kg/m³) = 800 - Volumic specific heat C (J.m⁻³.K⁻¹) = ρc = 84000 - Diffusivity a (en m².s⁻¹) = $\lambda/\rho c$ = - Resulting emissivity (adimensionnall) : ϵ_{res} = 1,62 10⁻⁷	<u>Other thermal data :</u> Reflection coefficient (adimensionnall) : 0,5* or Absorption coefficient (adimensionnall) : 0,5* <u>Main mechanical data:</u> E modulus (MPa)= 1840 Compressive strength (MPa)= 0.5 Tensile strength (Mpa)= 0.5 <u>Complementary data:</u> Porosity : 2% Shore hardness: 35 shore D Adherence(Mpa) > 0.5 * coat covered with hardening agent
Durability	
PH : 13	
Product and company identification/Commercial name/ Applicators	
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Documentation/References	

