



NAFFCO PSV-C-1

SPRAY-APPLIED FIRE RESISTIVE MATERIAL FOR STEEL STRUCTURE

TECHNICAL DATA SHEET

- **Water-based.**
- **Interior/Exterior* Application.**
- ANSI/UL 263 (ASTM E119).
- D997, E705, N813, N870, Y739, Y740, Y741 and Y742.
(Refer to the UL certificate for minimum required thickness)
- Fire resistance rating: R15 - R240.



* Subjected to appropriate weather conditions.

PRODUCT TYPE - CEMENTITIOUS PAINT

NAFFCO PSV-C-1 is used for the interior and exterior steel structures of buildings with excellent adhesion. NAFFCO PSV-C-1 is formulated with materials such as cement, vermiculite, fibre (asbestos-free) and special inorganic fire protection materials, not only to keep the intensity of cement rigid & also with the tough characteristic of interlaced fibre like a net, its physical properties is better than the similar products available in the market.

While burning, it would not generate any toxic smoke and is still firm as it was before burning, so without destruction it can be arisen by the firestorm. NAFFCO PSV-C-1 provides fire rating up to 4 hours.

PHYSICAL PROPERTIES DATA

1.	Colour (after curing)	:	Greyish white
2.	Dry Density (ASTM E605)	:	26/28 PCF (Min. Ind./Avg.)
3.	Combustion Test (5600 °C/30 min)	:	No CO, CO ₂ gas produced
4.	Compressive Strength (ASTM E761)	:	Min. Avg. 6,000 PSF
5.	Cohesion/Adhesion (ASTM E736)	:	Min. Avg. 600 PSF
6.	Deflection (ASTM E759)	:	Pass
7.	Impact Resistance (ASTM E760)	:	Pass
8.	Anti-Corrosion (ASTM E937)	:	0.00 gm/mm ²
9.	Air Erosion (ASTM E859)	:	0.000 gm/ft ²
10.	Flame Spread (ASTM E84)	:	0 (over-coating of 1 coat of Clear Paint still be zero)
11.	Smoke Development (ASTM E84)	:	0 (over-coating of 1 coat of Clear Paint still be zero)
12.	Combustion Characteristic (ASTM E136)	:	Non Combustible
13.	Heat Conductivity (JIS A 1412)	:	0.079 Kcal/mhoC at Avg. 30°C
14.	Sound Absorption (ASTM C423)	:	NRC = 0.60 at 25 mm
15.	No Sagging (One Coat)	:	> 15 mm each coat (Normal Operation)
16.	pH Value (Stir with water)	:	Around 12
17.	Packaging	:	15 kg per bag
18.	Application Method	:	Spray or Manual Trowel
19.	Appropriate Substrates	:	Steel or Concrete
20.	Curing Time (20°C/50% RH)	:	Rough Dry : 2~6 hrs.

NOTE: NAFFCO reserves the right to change the content without notice.

Reach 50 % Strength	:	5~7 days
Reach 70 % Strength	:	10~12 days
Reach 98 % Strength	:	> 28 days

21. Shelf Life (Normal Environment) : At least one year

(Note 1) - Dry Density according to ASTM E605 test refers to the curing equilibrium state, and not the absolute curing state. Under normal circumstance, NAFFCO-PSV-C-1 reach curing equilibrium state when the water absorption is below 15%.

(Note 2) - The actual consumption of NAFFCO-PSV-C-1 will vary according to the wastage, and the wastage depends on the application environment and work requirements.

CHARACTERISTIC

1. EXCELLENT PHYSICAL PROPERTIES

NAFFCO PSV-C-1 is light but tough. Excellent compact, compression and bend resistance to suffer hard hits without flaking because of its anti-crack textile fibre property. It even has fairish physical property. It can bear up to three hours of burning in flames without chalking or softening. Its fire resistive strength is guaranteed.

2. NO ASBESTOS CONTENT

The product doesn't contain any asbestos ingredient. It has been tested by the Building Performance Institute Experimental Group, Ministry of the Interior. The smoking quantity is tested zero by the American Underwriters Laboratories Inc. according to ASTM E84 (UL723).

3. SELF CORROSIVE PREVENTION

The containing ingredients may inhibit the oxidation of iron and do not cause corrosion phenomena to directly contact with the steel.

4. EASY APPLICATION, LOW POLLUTION

Add water and stir well. NAFFCO PSV-C-1 can be sprayed immediately. The finish can be topped with various protective and decorative coatings (Optional). The decorative coating may not only increase the colourful appearance but also protect the coating to avoid directly contacting with air pollution which helps extend the warranty period of the product.

5. BEST QUALITY, STABLE SUPPLY

The product is certified by Germany TUV CERTIFIED DIN EN ISO 9001:2008 and has joined Follow-up Server of American Underwriters Laboratories Inc. The Annual production of up to 1 million bags are done by using automatic equipments. The quality and supply of NAFFCO PSV-C-1 is better than other domestic and foreign products.

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6. FIRE TESTING CERTIFICATION

- (1)** NAFFCO PSV-C-1 is American UL Certified according to ANSI/UL 263 (ASTM E119) which is “Fire Test of Building Construction and Materials” and registered in an American Underwriters Laboratories Inc. annual issue in fire-resistance directory, Design No. D997, E705, N813, N870, Y739, Y740, Y741 and Y742.
- (2)** NAFFCO PSV-C-1 has successfully passed the test of England Bodycote Warringtonfire Global Safety according to BS 476, Part 21:1987.

APPLICATION OF PAINT

Because the fire resistive coating belongs to porous material, it can also be exposed in an open environment for a long term, therefore a dust-proof or water-proof coating can be done on it to increase durability and to beautify the appearance.

(Note 1) - The lowest environmental and substrate surface temperature must be above 4°C, such temperatures should be exceeded 24 hours before and after the application of NAFFCO PSV-C-1.

(Note 2) - The lowest environmental and substrate surface temperature must be below 50°C for NAFFCO PSV-C-1.

(Note 3) - The temperature of substrate must be minimum 2°C above dew point temperature.

FIRE PROTECTION COATINGS & MATERIALS SECTION
PASSIVE FIRE (PF) DIVISION, R&D DEPARTMENT
NAFFCO Flow Control.

In case of any questions please contact our technical support team.
For full product documentation and other information please visit our website www.naffco.com

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FLOW CONTROL
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In line with NAFFCO policy for continuous product development, NAFFCO has the right to change specifications without prior notice.