

MANUFACTURER

NANVERA Advanced Materials

PRODUCT CODE (SKU)

KL-013 — NAN-VE FireProof

REVISION DATE

June 2026 / Rev. 05

1. Product Description

Technical Description: An advanced water-based dispersion lining coating that acts as a Thermal Barrier to protect structural elements.

Mechanism of Action: Not based on intumescent technology (Non-Intumescent). Upon exposure to fire, the product forms a stable, heat-dissipating carbon barrier layer (Heat Sink) that reduces heat transfer to the substrate, with a self-extinguishing effect.

2. Engineering Components — Standardized Application Systems

To ensure complete protection, the material must never be used on its own — it must be applied as part of one of the two systems below.

System A (walls and wood): primer – NAN-VE Thermal CT; insulating lining – NAN-VE FireProof; finish coat – NAN-VE Top Guard.

System B (metal and iron): anti-corrosive primer – NAN-VE Metal Guard; insulating lining – NAN-VE FireProof; finish coat – NAN-VE Top Guard.

4. Application Instructions

Coverage rate: 6 m²/kg at a wet film thickness (WFT) of 160 microns (per coat, for the lining). Drying times: surface dry in 60 minutes; full cure in 72 hours.

5. Occupational Safety

Environmental Classification: Water-based, ultra-low VOC content (<10 g/L). Environmentally friendly. Required PPE: Despite its environmental safety, safety goggles and gloves are mandatory during spraying or application.

7. Laboratory Test Codes and Accreditations

National Accreditation: Egyptian Ministry of Defense (Chemical Warfare Department – Report No. 64/S/M) and the National Housing and Building Research Center (HBRC).

Fire Resistance Codes: Designed to exceed the following standards: ASTM E119, BS 476 Part 20/21, EN 13381-8.

3. Technical & Physical Properties

Property	Value
Color	White, tintable only
Density	1.12 g/cm ³

Property	Value
Solid Content	59%
Flash Point	Non-flammable in liquid state (water-based)
Fire Resistance Rating	120 minutes (2 hours): structural stability and formation of a thermal barrier preventing collapse
Coating Thickness Efficiency	Only 500 microns: achieves two-hour protection at a thickness of just 500 microns, significantly reducing "dead loads" compared to traditional epoxies (1500–2500 microns)
Thermal Stability (Steel)	Reduces flame temperature from 600°C to 200°C, below steel's critical failure point (500°C)
Thermal Stability (Wood)	Reduces flame temperature from 600°C to 98°C, preventing charring and self-ignition

6. Legal / Engineering Disclaimer

The company disclaims all responsibility if NAN-VE FireProof is applied as a final finish coat, or if applied outside the scope of the two approved systems (A and B).