



TECHNICAL INFORMATION

Testing

VermiteX[®] TH FRL's range from 30 minutes to four (4) hours inclusive.

VermiteX[®] TH has been successfully tested in accordance with Standards AS 1530.4, BS 476 20 & 21 Appendix D, BSEN 1363, ASTM E119, UL1709 and RWS.

The CSIRO has referenced, analysed and assessed the test data for compliance with other International Standards.

Thickness Range

Typical VermiteX[®] TH material thicknesses to achieve the designated FRL (in minutes) on concrete substrates are tabled below:

Fire Resistance Level (or Period)	VermiteX [®] TH thicknesses (mm)
120/-/- to 120/120/-	12 to 15
240/-/- to 240/240/-	25 to 35

Please refer to LAF for further technical information and material thicknesses for your project.

Health and Safety

VermiteX[®] TH contains no asbestos and presents no known health hazard before, during or after application. Normal precautions for cement products apply, including dust mask, eye protection and covering of sensitive skin.

Contact

For more information on VermiteX[®] TH and our complete range of products for the construction, industrial and agricultural sectors, contact LAF Group by telephone, facsimile, email or visit our website. Contact points are provided below.



VERMITEX[®] TH

PRODUCT INFORMATION



Spray-on fire-resistant coatings for hydrocarbon fires

What is VermiteX[®] TH

VermiteX[®] TH is a heavy duty fireproof coating especially designed to protect concrete, structural steel, alloys, advanced composites and other engineering substrates from hydrocarbon fires.

It is used for the protection of assets and human life where there is a risk of exposure to fire from hydrocarbon sources, such as in industrial and petrochemical installations, and above ground and subterranean vehicular tunnels.

VermiteX[®] TH finds diverse applications in industrial and petrochemical environments, in protecting the skirts of columns, verticle vessels, the supports of free standing and horizontal vessels, pipelines, risers and partitions, against fire.

VermiteX[®] TH is also suitable for fire resistance upgrades to existing tunnel systems, as well as to impart a fire resistance rating to new tunnel construction.

Fire Enclosures

In addition, LAF designs, develops, tests, and manufactures protective enclosures to fit vulnerable and critical pieces of equipment (such as valves, instrumentation, and actuator control systems) against fire.

These light weight yet robust systems, fabricated from VermiteX[®] TH, are capable of providing up to four (4) hours fire protection against flame temperatures in excess of 1,200 degrees Celcius.

Please contact LAF for more information.

VERMITEX® TH



How Does It Work?

VermiteX® TH is a lightweight coating engineered from expanded vermiculite of appropriate sizing, and inorganic binders. During the mixing process, the air-entraining product generates copious amounts of micro-dispersed air bubbles. This ensures a high resistance to fire and reduced thermal conductivity.

Production

VermiteX® TH is manufactured under factory-controlled conditions to ISO 9001-2000 Quality Standard, delivered to site in 'batch' form, and mixed with clean water to the required consistency before application.

Packaging

VermiteX® TH is packaged in polypropylene lined paper value sacks which can be stored for up to six months under dry conditions. Bags should be stored covered, off the ground, and away from wet or damp surfaces or areas of high humidity.

VERMITEX® TH



Application

VermiteX® TH is easily applied with commercially available cementitious spray equipment to a variety of substrates, generally without the need for mechanical reinforcement. Please refer to the LAF Group for technical recommendations specific to your project requirements.

Before application, the substrate must be free of all oil, excessive dust, loose scale, rust, mould release agents, and any other substance that may impair adhesion.

Up to 20mm of VermiteX® TH may be applied at one time. The initial coat will set in four to six hours. The recommended interval between coats is two to eight hours.

Additional coatings should only be applied over partially set coatings. If this is not possible, the surface of the last coating should be textured or 'scratched' to improve adhesion.

Ambient temperatures should not be allowed to drop below 4°C for 24 hours following application. When applied in well-ventilated areas, the coatings will dry in approximately weeks.

VermiteX® TH may be top coated with a suitable sealer or membrane system for added protection against chemically aggressive environments.

The final VermiteX® TH coat may also be coloured with oxide pigment.

Concrete Substrates

When applying to concrete without mesh reinforcement, a bond coat such as VermiteX® TH should be applied to between 50 and 75 per cent of the area. This will improve adhesion and reduce slippage during application.

Steel Substrates

No mesh reinforcement is required if applied directly to bare steel.

Mesh reinforcement is recommended where VermiteX® TH is applied to primed steel.

Some primers may react adversely with cement and plaster compounds. Where a primer must be used, LAF recommends an alkali resistant zinc-rich primer.

Mechanical (mesh) reinforcement may also be required in some external applications. Please refer to LAF for technical details specific to your project requirements.



Coverage

The theoretical yield of one 50 litre bag of VermiteX® TH will cover approximately 1m² at a nominal thickness of 50 mm. Type of equipment, overspray and waste will have an effect on bag yield and it is recommended that 10 to 15 per cent waste be allowed for coverage calculations.

Density

Dry density: 400 kg/m³

Thermal Conductivity

Thermal conductivity of 0.114 W/m.K