EDILTECO®
group

®PROTHERM light

a complete range of plasters for
the passive fire protection

PROTHERM light
Fireproofing Division

PASSIVE FIRE PROTECTION OF STRUCTURES

PROTHERM LIGHT®

THE MOST VERSATILE AND CERTIFIED PLASTER FOR FIRE PROTECTION ON THE MARKET

WORKING LIFE
25 YEARS

Lightweight premixed thermal insulating plaster based on virgin EPS beads, water binders and special additives for mechanical application.

- Available colours: white and grey.
- Fireproofing protective system, specifically designed to improve the passive fire resistance of structural elements made of steel, normal and pre-stressed reinforced concrete, corrugated sheet, brick and on buildings for civil and industrial use.
- For internal and external use.
- It does not contain fibres.

CE

Updated
ETA 18/1111
according to
European Regulation
ENV 13381

PROTHERM LIGHT® Plaster for the passive fire protection of structures			
TECHNICAL CHARACTERISTICS	**VALUE**	**M.U.**	**REGULATION**
Available colour	white - grey	-	-
Density	approx. 300	kg/m^3	-
Compressive strength	0,97	N/mm^2	UNI EN ISO 12390-3
Flexural strength	0,35	N/mm^2	UNI EN ISO 12390-5
Thermal conductivity λ_D	0,079	W/mK	UNI EN 12667
Fire reactivity	A1	-	UNI EN 13501-1
Packaging	18	kg/bag	-

APPLICATION	
Laying surface	According to the classification report
Minimum and maximum thickness	According to the classification report
Weight and yield	~ 3,0 kg/m^2 for 1 cm of thickness / each bag ~ 6 m^2 for 1 cm of thickness
Drying time	On the surface: 24 hours at 20 °C with normal ventilation

When **PROTHERM LIGHT®** plaster is exposed to fire, the heat is absorbed by the product and the polystyrene beads sublimate without flame and smoke emission. This creates a structure composed of cement binder and the empty cells left by the sublimated polystyrene beads. Therefore the plaster changes its physical characteristics and becomes a layer of material with high temperature resistance. This advantage can be added to that resulting from the crystallized water loss and to the thickness of the material. The pictures below show the plaster before and after the exposure to flame and heat: the beads are replaced by void cells.

PROTHERM LIGHT® plaster is safe to apply without the need of special equipment.
It is recommended to read the application manual before use.

See the technical data sheets and application manuals.

PROTHERM LIGHT® IS CERTIFIED

ETA 18/1111 OF 29/01/2019

ISSUED BY THE APPROVED LABORATORIES OF EOTA CIRCUIT

PROTHERM light®

for fire resisting application

EOTA 2019 news!

PROTHERM LIGHT®

Once applied it looks like a normal fire protection plaster but it has the following significant differences:

- It has a low density of 300 kg/m^3 (dry).
- It can be rendered, smoothed and painted; any top finishing is possible.
- It has good impact and mechanical resistance characteristics (compressive strength of 0,97 N/mm^2).
- It is resistant to the atmospheric agents. It can be applied also outdoor on wet supports.
- It is stable over time.
- It has high thermal insulating properties (λ_D = 0,079 W/mK).
- It has quick drying times.

PROTHERM LIGHT® AVAILABLE ASSESSMENT

APPLICATION	REGULATION	ASSESSMENT REPORT N°
Concrete	UNI ENV 13381-3	CSI1895FR - CSI1896FR
Steel	UNI ENV 13381-4	CSI1784FR
Corrugated Sheet + Concrete	UNI ENV 13381-5	13_02603-1-a
Horizontal protective membranes	EN 13381-1:2014	067638-005-1

The assessment for the correct dimensioning of the thickness of **PROTHERM LIGHT® plaster** on structural elements of steel, reinforced concrete, mixed steel/concrete and concrete are available.

FIRE RESISTANCE

European Regulation for protective coating

The publication of the European standards has introduced precise instructions regarding the way to verify and determine the fire resistance performances of the structural elements of all the building subject to the control of the Fire Department. With reference to the insulating plasters used to increase the fire resistance performances of the structural elements, the compliance to the experimental European regulations EN 13381 listed in the A.3.2 table of the A attachment is strictly required.

These standards consist in the experimental development with standardized procedure on defined types of structures at different thickness of insulating plaster. The numerical analysis of the temperature data, according to the time of fire exposure, allows to translate the data in a classification report (Assessment). This document available to designers, contains a performance chart, indicating the required thickness according to the type of structure and execution of the analytical assessment, replacing the tabulated values of the repealed technical standards. The performance chart, calculated according to EN 13381, is the only one approved by the Legislative Decree to determine the thermo-physical parameters of the protective systems.

What is **PROTHERM** light®

The long lasting experience of Edilteco as world manufacturer of lightweight and thermo-insulating mortars has led to the development of the new PROTHERM light® products range to be used for the passive fire protection of the buildings. Our purpose is always the same: to develop products and building equipment for the wellness and safety of the people. The PROTHERM light® range provides to professionals all the fireproofing equipment for the fire protection of the buildings such as airports, petrochemical industries, hospitals, schools, tunnels, skyscrapers and residential complexes.
This range is the result of the constant technological development, aimed at saving human lives and protecting the infrastructural assets.

PROTHERM light®
A complete range of plasters for fire protection.

FOR THE FIRE PROTECTION OF **INDUSTRIAL BUILDINGS, AIRPORTS, HOSPITALS, SCHOOLS, MALLS, UNDERGROUND PARKINGS, TUNNELS ...**

PROTHERM light® HAS BEEN CHOSEN FOR
EDILTECO REFERENCES

MULTIPLEX CINEMA - TORINO - ITALY

ST. THERESA VILLA - BAGHERIA (PA) - ITALY

"CIRCONVALLAZIONE NORD" TUNNEL LINING - ROME - ITALY

AIRPORT - BARI - ITALY

JUVENTUS STADIUM - TORINO - ITALY

POST OFFICE - CATANIA - ITALY

MASERATI FACTORY - MODENA - ITALY

NATIONAL CAR RENTAL - TOCUMEN - PANAMA

MIOVENI HOSPITAL - ROMANIA

AVIKOTE AV-650®

EXCLUSIVE DISTRIBUTION ON THE EUROPEAN MARKET

Lightweight cement-based plaster for the fire protection from hydrocarbons. Avikote AV-650® can be applied by spraying or trowel, only adding water on site.
Tested for external use, the main application fields are: petrochemical plants, Oil&Gas industry and refineries.

by ARABIAN VERMICULITE INDUSTRIES

FEATURES AND BENEFITS

- **Fire Tested:** Tested in accordance with Underwriters Laboratories, Inc. UL-1709, ASTM E119 (UL-263) and BS 476 (Part 20). Tested to OTI 95 634 at Health & Safety Laboratory UK for Jet-Fire. Investigated by UL for exterior use. Evaluated for protection under NPD and BS 476 (Part 20) Appendix D Hydrocarbon Fires. Additional Testing done at TNO Holland for use to the soffits of Transport Tunnels when exposed to RWS Fire Curve.
- **Durability:** Avikote AV-650® has been tested for Bond Strength, Compressive Strength, Hardness, and other properties in accordance with API guidelines (Publication 2218) and ASTM test procedures.
- **Equipment Versatility:** Avikote AV-650® may be applied by a wide range of pumping equipment - Mono, Rotor Stator, Piston or Hydraulic. Also, Avikote AV-650® may be used with paddle mixers and some continuous mixers.
- **Economical:** Avikote AV-650® can build to higher thicknesses per pass and allows for greater applicator efficiency. This reduces time on the job site and the labor required in application compared to other products.

COATING REQUIREMENT

Steel Coating: Avikote AV-650® does not promote the corrosion of steel. For the use in wet or corrosive environments, a corrosion inhibitive and non alkali sensitive coating should be applied to the steel prior to the application of the fireproofing material. Contact Edilteco representative for recommendations on these coatings.
Fireproofing Sealer: the use of latex, polyurethane or epoxy topcoat will enhance the surface characteristics of Avikote AV-650®.

APPLICATION AND PERFORMANCE CHARACTERISTICS

Avikote AV-650® fireproofing material shall not be used if it contains partially set, frozen or caked material. Avikote AV-650® shall have a minimum average dry, in-place density of 640 kg/m^3 (40 pcf). Avikote AV-650® is formulated to be mixed with water at the job site.

Avikote AV-650® is applied directly to the steel in different layer using standard plastering equipment or continuous mixer/pump units. A spray gun with a properly sized nozzle with spray shield, and air pressure at the nozzle of approximately 140 kN/m^2 (20 psi) will provide the correct bonding, density and appearance.

TECHNICAL CHARACTERISTICS	VALUE (MINIMUM)	TEST METHODS
Dry density	640 kg/m^3 (40 pcf)	ASTM E 605
Bond strength	593 kN/m^2 (12.412 psf)	ASTM E 736
Compressive strength	3.780 kN/m^2 (550 psi)	ASTM E 761
Hardness (Shore D)	42	ASTM D 2240
Air erosion	0 g/m^2 (0 g/ft^2)	ASTM E 859
Yield / Bag	1,39 m^2 to 25 mm	Theoretical maximum
Packaging	22,2 kg	Polyethylene lined kraft bag
Corrosion	Does not promote corrosion of steel	ASTM E 937
Thermal conductivity λ_D	0,28 W/mK (1,195 Btu-in/Hr Ft^2 °F)	ASTM C 518
Color	Grey	-

EDILTECO,
AN INTERNATIONAL SUCCESS

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360° Insulation

Edilteco S.p.A. Via dell'Industria, 710 . 41038 San Felice sul Panaro (MO) Italy . Ph. +39 0535 82161 . Fax +39 0535 82970
www.edilteco.com | **info@edilteco.com**

YouTube Consult our technical and application videos on the **Edilteco YouTube Channel . www.youtube.com/user/EDILTECOvideo**

Edilteco is associated with:

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =

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