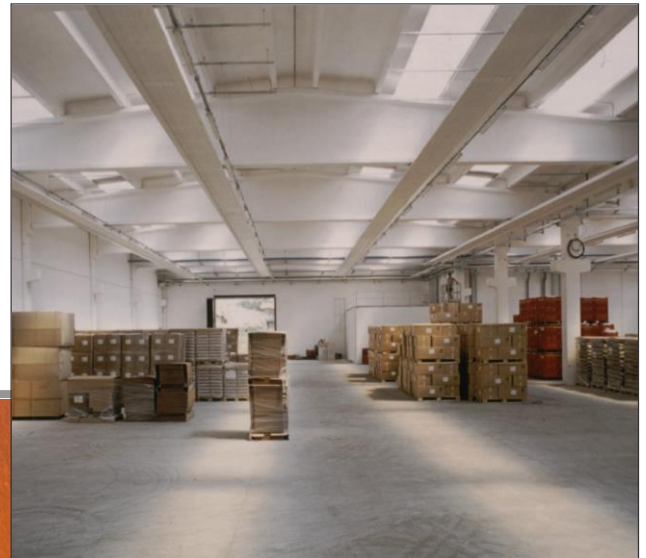


AITHON A90H

**fire protection
of concrete
structures**



BS EN 13381-3 / BS EN 12501-2:

- ▶ **R240 on concrete slabs and walls**
- ▶ **R120 on concrete beams and columns**

A FIRE TEST ON A CONCRETE SLAB

- **FOR CONCRETE AND PRE-STRESSED CONCRETE**
- **WATERBORNE, LOW VOC COATING**
- **CLASSIFIED IN Y CLASS: NO NEED OF TOP-COATING EVEN IN HIGH HUMIDITY AND LOW TEMPERATURE INTERIOR ENVIRONMENT**



AFTER FOUR HOURS OF FIRE TEST
THE CHAR CREATED BY AITHON A90H STILL
SHOWS AN IMPRESSIVE ADHESION TO THE
CONCRETE SURFACE

***hard, thin film intumescent coating
for durable fire protection and decoration***

Up to 240 minutes fire resistance according to BS EN 13381-3 and BS EN 13501-2

The BS EN 13381-3 regards the fire resistance of concrete structures and the performance of the intumescent coatings applied on concrete are expressed in terms of **equivalent concrete thickness**. The method defines the quantities (in gr/m^2) of intumescent coating required to achieve the same insulation performance provided by different thicknesses of concrete.

The calculation of the equivalent concrete thickness required for slabs and walls exposed to fire on one side is based on fire test results achieved on loaded slabs having minimum (500 gr/m^2) and maximum (2035 gr/m^2) applied quantity of intumescent coating. Linear interpolation between minimum and maximum is allowed.

AITHON A90H	Fire resistance time (min.) (exposed to fire on one side)					
	30	60	90	120	180	240
required quantity gr/m^2	Equivalent concrete thickness (mm)					
500	12,5	10,4	8,3	5,4	--	--
1000	16,4	16,9	14,5	11,7	--	--
1500	20,3	23,4	20,6	18,0	--	--
2035	24,5	30,4	27,2	24,7	21,6	18,2

The calculation of the equivalent concrete thickness required for beams and columns exposed to fire on three of four sides is based on fire test results achieved on loaded beams having minimum (500 gr/m^2) and maximum (2092 gr/m^2) applied quantity of intumescent coating. Linear interpolation between minimum and maximum is allowed.

AITHON A90H	Fire resistance time (min.) (exposed to fire on three or four sides)			
	30	60	90	120
required quantity gr/m^2	Equivalent concrete thickness (mm)			
493	16,1	14,2	12,8	0
1000	21,5	20,7	19,1	10,6
1500	26,8	27,1	25,3	21,0
2092	33,0	34,7	32,6	33,2

Fire protection and decoration

AITHON A90H has a smooth, matt white finish and does not need a top coating even in high humidity, low temperature environment (classified Y according ETAG 18-2)

But if a decoration is required, **AITHON A90H** has a suitable top-coating which provide a satin or matt finish in the full RAL colour range

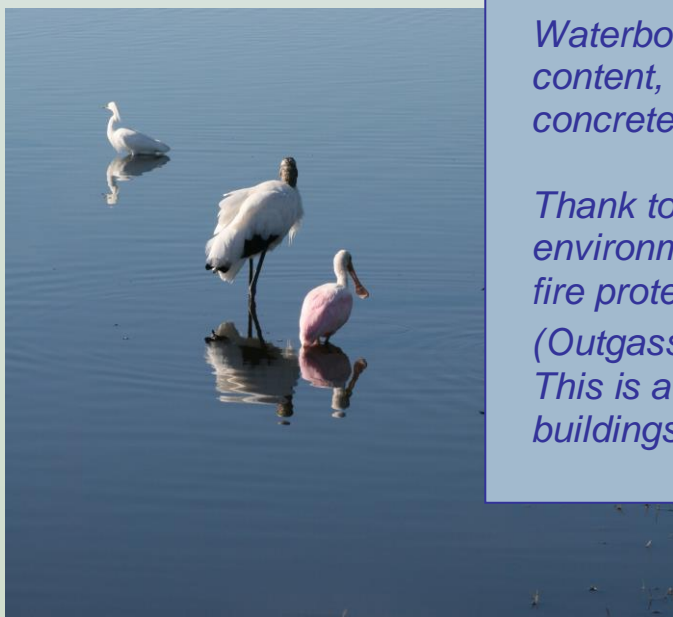


30 years guarantee

Defining the lifetime of a fire protection system is often a difficult problem to solve. The over 30 years of our experience in research and development of intumescent coatings, together with the high quality of the raw materials that we use, allow us to offer a 30 years guarantee for all our intumescent coatings and varnishes. For further details about our guarantee program please contact our technical service.

Technical data	Solids by volume	66%
	solids by weight	72%
	density	1,33 Kgr/lit
	colour	white
	viscosity	thyxotropic product
	VOC	< 45 gr/lit
	VOC (on request)	< 5 gr/lit

Application	thinner	water
	wet film thickness	2 Kgr/sqmt for 1500 micron
	dry film thickness	2 Kgr/sqmt for 1000 micron
	first coat	< 250 gr/sqmt (recommended)
	further coats	up to 1 Kgr/sqmt per coat
	Drying time (20°C, 65% R.H.)	dust dry: 30 mins.
		touch dry: 2 hours
		3 – 4 hours between coats
	Top coating (if required)	after 24 hours
Shipment weight	20 Kgr net plastic pails	



ENVIRONMENTALLY FRIENDLY

Waterborne, halogen-free, low VOC content, AITHON A90H protects concrete as well as the environment.

Thank to its very low emission to the environment, A90H is approved for the fire protection in clean rooms (Outgassing tests at 40°C: 2,6 µg/g). This is a guarantee for any sensitive buildings like schools and hospitals.

AITHON RICERCHE INTERNATIONAL s.r.l.

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