

FireTex® is a high performance biological fire retardant and superior fire extinguisher.

FireTex® is an **effective, natural, non-toxic, ecologic and economic water based** fire-retardant and fire-extinguisher. It renders cellulose based materials like wood, paper or cotton incapable of being set on fire. **FireTex®** slows the flame spread substantially and **highly** reduces smoke development and afterglow in fire situations.

FireTex® products are applied as penetrate, lacquer or composite in the wood-industry and also contains natural additives that has a **non-hazardous effect on the environment!** **FireTex®** as an extinguisher on the other hand is an economic solution for fire safety. It is used by fire fighter organizations, in water tanks of buildings and factories. When sprinkled on fire it is 20 times more effective than water and therefore substantially reduces and eliminates flashover which will **end further fire damage.**

FireTex® advantages are:

1. **100% biological**
2. **100% bio-degradable**
3. **100% environmentally friendly**
4. **100% natural insecticide and fungus-cide (non –toxic)**
5. **100% unlimited shelf life**
6. **odour and colour- less**
7. **economic – 1 : 20 FireTex® to regular water**

What is FireTex®?

- FireTex® Fire retardant for composites is unique water based liquid blend of a mineral formula that increases fire resistance on cellulose based materials. It is composite contains natural additives and act as very effective biological insecticide and fungicide.
- FireTex® offers an economical solution for effective fire protection.

How does FireTex® work ?

FireTex® is an ecological, inorganic, waterbased fluid that compounds into cellulose cells. As inorganic material has a considerable lower flammability than organic cellulose cells, it prevents effectively cellulose and cellulose derivatives from flaming and combusting.

Applications

- Inflammable chip board, plywood, OSB, MDF, HDF production.
- Fire protective, insecticide and fungicide of fabrics such as fire-fighter clothes, tents, curtains or cotton packages.
- Production of water based protective lacquers and finishes for wood.
- Fire protective household and automotive textiles.
- Mite killer on various purposes.

Storage, Handling and Packing

- FireTex® Composite is shipped in a variety of container sizes, including one ton IBC and 200 liter plastic drums. Drum shipments are made in truckload quantities. Drums are on pallets and shrink wrapped for protection.
- Storage can be done outside or inside but containers should be kept closed until application process.
- FireTex® Composite should be stored in closed containers & drums to protect from any contaminants such as dust, oil etc under 80°C. Stored properly, the shelf life is unlimited.

FIRETEX® SAVES MONEY, TIME AND LOGISTICAL CAPACITIES, BUT MORE IMPORTANT LIVES AND THE ENVIRONMENT.

FireTex® as a **Preventor** is used for the protection against fire and combustion of flammable cellulose based materials, and reduces smoke development and afterglow.



1. **Prevention of Wood / forest fire**
2. **Wood plate material like ply-wood underlayment and MDF**
3. **Paper and paper based materials like Trespa**
4. **Natural Textiles like cotton, hemp, silk etc...**
5. **Other organic materials like thatched roofs etc...**

FireTex® can be mixed with pre-produced cellulose-based materials during production (materials will be fire proof). FireTex® can also be used for fire protective treatment on finished cellulose based products.

Methods for Plywood, OSB, Chipboards

1st Method: Mixing into adhesive

Adhesive for plywood/OSB/chipboard productions usually will be deluded with water. The easiest way to use **FireTex®** is to replace water used in the glue with **FireTex®**, by just adding **FireTex®** in 1:1 ration instead of water.



We do not recommend using more than 9 L of **FireTex®** in adhesive per batch (based on 1m³ material) as the glue will lose stickiness. **With this method it is possible to achieve an average fire resistance up to 186,75 %.**

*** 2nd Method: Sprinkling on Wood Splints**

The second method allows an almost unlimited fire resistance, by simply sprinkling **FireTex®** over the wood splints before entering the drying drum.

Depending on the amount of **FireTex®** used, the fire resistance can be elevated according to the industry requirements.* A further advantage of the second method is that possible material inflammation after drying drum is prevented.



The ratio to use fire-fighter in 1m³ material* is following: *plywood, OSB or chipboards

1	20,75	16	332
2	41,5	17	352,75
3	62,25	18	373,5
4	83	19	394,25
5	103,75	20	415
6	124,5	21	435,75
7	145,25	22	456,5
8	166	23	477,25
9	186,75	24	498
10	207,5	25	518,75
11	228,25	26	539,5
12	249	27	560,25
13	269,75	28	581
14	290,5	29	601,75
15	311,25	30	622,5

FireTex® in litres
versus Increase in Fire
Resistance,
(per 1 m³ material) in %

FireTex® as an **extinguisher** can be used for fire fighting of any kind, for example:

- 1. forest fire**
- 2. domestic fire**
- 3. industrial fire**

FireTex® Extinguisher has been specially treated to slow down the spread of flames and smoke. It is **20 times more effective than water** and substantially reduces or **eliminates flashover** and the result in fire-destruction.

Economical, ecological and easy to work with, **FireTex® Extinguisher** is widely used in water tanks of buildings like business centers, hospitals, schools, shopping malls, factories, as well as in combination with the fight against forest fires.

Example 1: Factory Depot

The advantages of using **FireTex® Extinguisher** in the water tank of a factory depot:

1. Time

If a depot would have e.g. 10 water sprinkler with a capacity of 5 L/minute, than 1000 L of water would need ca. **4 hours** to be sprinkled on fire, wherelese 50 L of **FireTex®** would need about **one minute**. Which results in..

2. Minimized Destruction

Fire can be controlled **20 times** faster, the spread of flames is slowed down efficiently and the danger of combusting is eliminated.

3. No Afterglow

As **FireTex®** is a natural fire retardant **afterglow** is eliminated automatically.

4. Minimized costs for Watertank

Instead of building a **1000 L** water tank, a **50 L** tank can be used, which results in minimized building costs.

Example 2: Forest fire

The advantages of using **FireTex® Extinguisher** on a forest fire.

1. Time

If a helicopter would have the capacity of 500 L/h and **5 helicopters** would be used 10 times to sprinkle a **10 000 L of water**,
it would take about 4 hours.

Where as **the same effect** is reached by sprinkling **FireTex®** only **one time** with **one helicopter** of 500L/h capacity.

2. Less Evaporation therefore more efficiency**3. Minimized Destruction & Saved Lives**

Forest fires can be controlled **20 times faster**, which **saves lives**, **minimizes** the destruction area, **slows** down the spread of **flames** and **smoke** and **eliminates the danger of combusting.**

4. No Afterglow

As **FireTex®** is a natural fire retardant afterglow is eliminated automatically, no further water treatment with helicopters is necessary.

5. Prevention

FireTex® is **100% natural**, therefore highrisk areas can be **treated in advance**, so that the **danger** of flaming is **minimized or eliminated.**

FireTex® products have been tested at Gazi University /Turkey ranked Class A, in accordance with ASTM D-76, D32218.

Tests with cotton	no FireTex®	FireTex®
Average flaming heat	53,4°C /153,45°F	178,6°C / 381,09°F
Resistance in percentage		71,2 %
Flaming time	8 sec	137 sec
Decrease in flaming		95 %
Glow time	11 sec	2 sec
Decrease in glowing		82,9 %

Tests with wood splints	no FireTex®	FireTex®
Average flaming heat	256,4°C/ 522,55°F	325,3°C/ 647,82°F
Resistance in percentage		22,2 %
Flaming time	60 sec	210 sec
Decrease in flaming		72 %
Glow time	210 sec	45 sec
Decrease in glowing		79 %

Tests with paper (80gr)	no FireTex®	FireTex®
Average flaming heat	67,8°C /179,64°F	143,2°C/ 316,73°F
Resistance in percentage		83,7 %
Flaming time	5 sec	120 sec
Decrease in flaming		94 %
Glow time	7 sec	2 sec
Decrease in glowing		62 %

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