

ISONEM[®] ANTI-FIRE SOLUTION



Fire Protection Solution

ISONEM ANTI-FIRE SOLUTION, PROTECTING LIFE & ENVIRONMENT AGAINST FIRE With "Anti-Fire" it is possible to keep the "burning substance" out of the burning process and to block the start of any fire. Isonem Anti-Fire surrounds the molecules of the applied material and disables the contact with oxygen. The active substances contained in Isonem Anti-Fire create a very strong thermal isolation, and prevent the accumulation of heat which could start the burning process. A useful result of this thermal isolation property is that in case of a fire, a door which is treated with Isonem Anti-Fire, prevents the flow of high temperatures from one side to the other. Tests have proved: **ISONEM ANTI-FIRE** was applied to a clipboard door (14mm thick), one side of the door was exposed to a continuous direct flame of 1500°C for 40 minutes whereas the reverse side has only reached the maximum temperature of 120°C. **ISONEM ANTI-FIRE** incombustibility solution is a product made from % 100 natural materials, with no hazards to human health, with no risks for environmental safety, which is 100% soluble in nature and which contains no banned materials in its composition. Furthermore that it is anti-bacterial, is also one of its advantages. When **ISONEM ANTI-FIRE** is applied to a material, its smoke contains 50% less carbon dioxide and carbon monoxide than its natural form. Furthermore the smoke and its nitrogen content is 20%-25% more. Thus in case of fire, the **ISONEM ANTI-FIRE** applied material does not burn and the smoke airless effect is reduced to half.

What makes the ISONEM ANTI-FIRE Incombustibility Solution unique? First of all, we must indicate that **ISONEM ANTI-FIRE** incombustibility solution is not a flame retarder, it provides an absolute flame resistance. Retarder of flame applied material (textile, wood etc.) when exposed to flame burns, and extinguishes when flame is off. The main issue is that the material should not continue to burn after exposure to flame source. This may decelerate fire's spread but never prevents fire. **ISONEM ANTI-FIRE** Incombustibility solution applied material however, do not ignite to cause flame.

WHERE TO USE "ISONEM ANTI-FIRE" AND HOW TO USE:

- WOOD AND CHIPBOARD INDUSTRY:** 1) Impregnation in pools filled with **ISONEM ANTI-FIRE** solution according to absorption characteristics of wood, or surface application by spray of **ISONEM ANTI-FIRE**. 2) On Mdf and Chipboards as per tested compatibility of initial dough with **ISONEM ANTI-FIRE**, used in the first production stage. If it is used by impregnation in pools the maximum application period for wood is one day. On chipboard and Mdf half an hour is enough. The absorption capacity of wood varies according to its hardness characteristic.
- PAINT INDUSTRY:** **ANTI-FIRE** does not mix or combine with the dye substance. Since the aim is to prevent dye from burning, the correct application is like this: Before dye and polish but after grinding. **ANTI-FIRE** is applied to the prepared and grinded surface and completely dried. It is absolutely necessary that the surface is dried. Immediately thereafter dye (paint, color) and polish is spread.
- GENERAL INDUSTRIES AND SECTORS:** General industries and sectors: Styropor, Sponge, Cloth, Cotton, Wool and so forth, Application of **ANTI-FIRE** is made by wetting (impregnation, liquid bath) the material, squeezing out the not absorbed solution and then drying to finish.

PACKAGE: 5 lt plastic barrel.

CONSUMPTION: Depends on application and surface. **ISONEM ANTI-FIRE** solution should be considered as water and the necessary quantity for the applications to various materials should be calculated on the basis of the respective absorption quality and characteristics.

TEST RESULTS:

THE LIQUID APPLIED TO	DURATION OF APPLICATION (*)	RESULT (BURNING)
PAPER - SPONGE - WOOD - TEXTILE - COTTON	TWO WEEKS	NO BURNING

(*) The time that the test materials were openly kept under room conditions in the laboratory after application of Anti-Fire incombustibility liquid and dried.

PAPER COTTON SPONGE TEXTILE WOOD

SOME PHYSICAL AND CHEMICAL PROPERTIES ABOUT ANTI-FIRE INCOMBUSTIBILITY LIQUID:

- **Boiling Point:** 98°C
- **Freezing Point:** -3°C
- **pH:** 3,74 (acidic)
- **TDS (Hardness) (1% water dilution) Sclerosis (Calcification Criteria):** 739 ppm
- **Evanescing (Evaporation) (60°C/ 24 hours):** 50 %
- **Deflagrate:** None
- **Burning:** None
- **Scent:** None
- **Frothiness (Bubble):** None
- **Color:** slightly blurred

RESULTS: As a result on the referred materials excluding darkening no activities like burning, ignition, melting could be observed, and consequently it has been proved that this liquid can be used against fire activities very effectively. Besides, the fact that the Anti-Fire incombustibility liquid has the characteristics to be acidic and to have a very high pH value, shows that in case this liquid is applied to clothes, blankets and similar daily used products its anti-bacterial characteristics will be seen.

HEALTH AND SAFETY: For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

STORAGE CONDITIONS/SHELF LIFE: 12 months from date of production if stored properly in unopened and undamaged original sealed containers at temperatures between +5°C to +35°C at dry conditions. Protect from excessive temperature and frost.



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