

## TECHNICAL DATA SHEET

# ISONEM ANTI-FIRE SOLUTION

(Flame-proof and Fireproofing Solution)

### Product Description

NON-FLAMMABLE and FIREPROOF SOLUTION, fireproof solution surrounds the molecules of the applied material and disables the contact with oxygen. Thanks to active substances contained Isonem Anti-Fire prevents to reach heat which could start the burning process. Thus, the substance it is applied never burns. This product was tested on a plywood wooden door. The front side of 14 mm thick plywood was exposed to direct flame under a temperature of 1500 °C for 40 minutes, and at the end of this period, it is determined that the temperature of the backside only elevates to 120°C. ISONEM ANTI-FIRE fireproof solution is a product that is produced of 100 % natural materials has no harm to human health, can 100 % soluble in nature and no contain banned materials. The fumes of a substance that is applied fireproof solution contain 50% less carbon dioxide and carbon monoxide than the natural state of the same substance. Besides, it is 20 - 25% richer in terms of smoke and nitrogen. Therefore, the suffocating effect of the smoke is reduced by half when the surface is not flammable. It is water-based, single-component.

### WHAT MAKES THE ISONEM ANTI-FIRE INCOMBUSTIBILITY SOLUTION UNIQUE?

First of all, we must indicate that ISONEM ANTI-FIRE fireproof solution is not a flame retarder, it provides an absolute incombustibility. When the flame retarder applied material (textile, wood etc.) is exposed to flame, it burns, and when the flame is off, it extinguishes. The main point is that the material does not continue to burn after it is moved away from the flame source. ISONEM Anti-Fire Solution applied material does not burst into flames.

### According to TSE TEST AND INSPECTION REPORT:

- INSPECTION AND EXPERIMENTS ARE DONE ACCORDING TO TS EN ISO 1716: 2010/JANUARY 2011.
- According to TS EN ISO 1182 /02.02.2012 DATE/ 139913 NO., in the result of the inspection and experiments, approved to CLASS A1 according to the criteria EN 13501-1/JANUARY-1 CHART-1.

### TEST RESULTS ACCORDING TO IZMIR INSTITUTE OF TECHNOLOGY BIOLOGY DEPARTMENT RESEARCH LABORATORY

**The material response application** : Paper - Sponge - Wood – Fabric – Cotton  
**Result** : NO BURNING

### CONCLUSION

No burning, glare, melting activity has been observed in the relevant materials except for growing dark, and as a result, it has been shown that this liquid can be used effectively against combustion events.

### Technical Specifications

Density (25°C, g/mL)	: 1,10 ± 0,10
Boiling point	: 98°C
Freezing point	: -3°C
pH	: ~ 3,74 acidic
Evaporation (60°/24 hours)	: 50%

<b>Solvent</b>	: Water
<b>Class of fire reaction</b>	: A1 Fire Class
<b>Combustion/Odor/Foaming</b>	: None
<b>Color</b>	: Slight blurred

## ISONEM ANTI-FIRE SOLUTION USAGE AREAS and METHODS

**For wood materials:** It can be applied with impregnation in pools filled with ISONEM ANTI-FIRE solution according to absorption characteristics of wood, or it can be applied to the wood surface via the spray. On Mdf and Chipboards, if it complies with the tested dough, it is used in the first production stage. If it is used by impregnation in pools, one day is enough for the holding period. On chipboard and MDF half an hour is enough. The absorption capacity of wood varies according to its hardness level.

**For the paint industry:** It is incompatible with the paint itself. Since the target is that the dye is not burned, the application is as follows; before painting or polishing, sanding is carried out and then ANTI-FIRE is applied immediately before painting, and then dried and definitely must be dry. Paint is made after this process.

**For industry sector:** Absorbent materials like fabrics, cotton, wool, sponges, etc. are wetted with ANTI-FIRE Solution, the not absorbed solution is squeezed out and dried. As a result of this process, the materials are nonflammable and fireproof.

## IMPORTANT

- The application surface must be clean and free from all impurities like dirt, oil, and mud.
- It should be applied to only absorbent surfaces (textile, wood, etc.).
- During and after the application, protect from external factors such as rain, water, mechanical impacts, etc. for 24 hours.

## Packaging & Storage

<b>Packaging</b>	: 5L PE Plastic can
<b>Storage temperature (°C)</b>	: 5 - 35 °C
<b>Shelf life</b>	: 24 months from date of production if stored in original, unopened, undamaged packages.
<b>Storage condition</b>	: Store tightly closed in a dry and cool place.

## Cleaning of Tools

Clean all tools and application equipment with clean water immediately after use.

## Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

### Statement of Responsibility

The technical information and application advice given in this ISONEM Paint & Insulation Technologies publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

