

# THERMCOAT

## Thermal & Acoustic Insulation Fire Rated PU Spray Foam

### 1 - Description

Thermcoat Thermal & Acoustic Insulation Fire Rated PU Spray Foam is a top quality heat and sound insulation foam at buildings and houses. Provides a unique, monolithic thermal insulation application without junctures, seams and gaps. Class A fire rated according to ASTM E84. Class E fire resistance according to EN 13501-1. An innovative alternative to traditional building insulation methods such as polystyrene heat insulation boards, glass wool and rock wool. Single-component product used with an applicator gun. It does not contain any propellant gases that are harmful to the ozone layer.

### 2 - Properties & Features

- Excellent adhesion to all kind of building materials.
- Can be applied easily to uneven, hard to reach surfaces where it is not possible to use traditional insulation materials.
- Complies with the requirements of EN 14315-1:2013.
- Excellent thermal insulation value 0.035 W / (m.K).
- Class A fire rated according to ASTM E84.
- Class E fire resistance according to EN 13501-1.
- Elimination of thermal bridges.
- Elimination of the dew point.
- Yield up to 3m<sup>2</sup> with 1.5cm thickness for one layer if applied from a distance of ~40cm with normal application speed,
- No need to use mechanical fastening elements after use.
- Over paintable.

### 3 - Fields of Application

- Roofs, attics, facades, foundations, basements, floors, interior walls, inter-floor overlapping, interior partitions, ceilings and cellars,
- Structural elements of buildings, balcony, loggia, doors, window slopes, pipes, canals and tank kind round surfaces, uneven and rough all surfaces,
- Car body and car trailers, boats, yachts, vessels and all kind of sea vehicles.

### 4 - Product Information

<b>Packacking</b>	850 ml / Gw. 930gr
<b>Shelf Life</b>	12 months
<b>Transportation Conditions</b>	Transport in a dry place in +5°C and +30°C
<b>Storage Conditions</b>	Store in cool and dry conditions between +5°C and +30°C

The foam maintains its usability within 12 months from manufacturing date, provided that it is stored in original packaging in vertical position (valve facing up) in a dry place in temperature +5°C to +30°C. Storage above +30°C and below +5°C shortens shelf life and properties of product will be affected. Storage of foam cans in temperature exceeding + 50°C or in vicinity of open flame is not allowed. Storage of the product in a position other than recommended may result in jamming the valve.

## 5- Technical Data

Foam	Method / Conditions	Value
Basis		Polyurethane Prepolymer
Curing Mechanism	Moisture cure	
Full Cure Time		24 hours
Foam Color		Yellowish
Yield		3 m <sup>2</sup> for 1,5 cm thickness
Flammability Class	EN 13501-1	E
Thermal Conductivity	DIN 52612 – TM 1020 : 2016*	0,035 W/m.K
Compression Strength	DIN 53421 – TM 1011 : 2013*	44,2 kPa
Water Absorption	EN 1609	0,12 kg/m <sup>2</sup>
Dimensional Stability	ISO2796/86 – TM 1004 : 2013*	±10%
Tack-Free Time	ASTM C1620 – TM 1014 : 2013*	5±2 min
Cutting time	ASTM C1620 – TM 1005 : 2013*	≤40 min
Flame Spread	ASTM E84 / UL 723	5
Smoke Developed	ASTM E84 / UL 723	90
Can/Applicator Temperature	Optimal 20°C	Between +5°C and +30°C
Temperature Resistance	Cured Foam	Between -75°C and +115°C
Application Temperature	Ambient and surface	Between +5°C and +30°C

\* Producer uses test methods approved by FEICA designed to deliver transparent and reproducible test results, ensuring customers have an accurate representation of product performance. FEICA OCF test methods are available at: <http://www.feica.com/our-industry/pu-foam-technology-ocf>. FEICA is a multinational association representing the European adhesive and sealant industry, including one-component foam manufacturers. Further information at: [www.feica.eu](http://www.feica.eu)

## 6 - Directions for Use

### Surface preparation and foam application;

- A. Surface cleaning:** Substrates must be sound quality, clean, dry and free of dust, grease, rust and other contaminants that may affect the adhesion. Sprinkle the working surface with water (with gardening sprinkler for example) at temperature >0°C.
- B. Product preparation;** If the can is too cold / hot then the can should be brought to room temperature, e.g. by immersion in cold / warm water or leaving it in room temperature for at least 24 hours. Optimal can temperature is +20°C.
- C. Foam application:** Put on protective gloves. Shake the can well before use. Each can have two special plastic nozzles for spraying to the wall and ceiling (See Picture 1). Nozzle A is for vertical surface applications and Nozzle B is for ceiling applications. Screw desired nozzle to the gun. Screw the can onto the applicator. Hold the can upside down and activate the foam by pressing the valve. Always handle the canister with the valve pointing downwards. Spray the foam 30-45cm distance from the wall or ceiling for applications. The product can be applied at any desired thickness as long as it is applied layer by layer. The thicker, the higher insulation value. For an effective insulation value, the recommended application thickness is 5 cm and should be reached to this thickness with minimum 3 layers. It is not possible to get the ideal insulation value with 1 or 2 layers. Moisturizing the surfaces and the foam improves adhesion and shortens curing time. Vertical gaps should be filled with foam starting at the bottom and moving up. Do not fill the entire gap – the foam will increase in volume.

**D. Tooling and finishing:** Immediately after full foam hardening, it should be secured against exposure to UV rays by using e.g. plaster or paints. The manufacturer recommends using the entire can without stopping more than 5 minutes between spraying due to foam drying in the applicator.

**E. Cleaning:** Fresh foam should be cleaned with AKFIX 800C Foam Cleaner. Cured foam can be cleaned barely mechanically.



Picture 1: Nozzle A on the left and Nozzle B on the right.

## 7 - Remarks & Restrictions

- The curing process is dependent on temperature and humidity. The decrease in ambient temperature within 24 hours after the application below the minimum application temperature can affect the quality and / or correctness of the seal.
- Hurried attempts at preliminary treatment may cause irreversible changes in foam structure and its stability and may affect deterioration of foam utility parameters.
- Quality and technical condition of used applicator affect the parameters of final product.
- The foam should not be used in spaces without access of fresh air and poorly ventilated or in places exposed to direct sunlight.
- Working in other position than "valve facing down" will decrease foam's efficiency.
- Cured foam will discolor if exposed to ultraviolet light.
- Paint or coat the cured foam for best results in outdoor applications.
- Lower temperatures decreases yield and curing time.

## 8 - Safety

Contains Diphenylmethane-4,4'-Diisocyanate. Harmful by inhalation. Irritating to eyes, respiratory system and skin. Do not breathe spray/vapor. Wear suitable protective clothing and gloves. Use only in well-ventilated areas. Pressurized container. Keep away from direct sunlight and do not expose temperatures over 50°C. Do not pierce or burn, even after use. Keep away from sources of ignition, no smoking. Keep out of the reach of children.

## 9 - Disclaimer

The technical data contained herein is based on our present knowledge and experience and we cannot be held liable for any errors, inaccuracies, omissions or editorial failings that result from technological changes or research between the date of issue of this document and the date the product is acquired. Before using the product, the user should carry out any necessary tests in order to ensure that the product is suitable for the intended application. Moreover, all users should contact the seller or the manufacturer of the product for additional technical information concerning its use if they think that the information in their possession needs to be clarified in any way, whether for normal use or a specific application of our product. Our guarantee applies within the context of the statutory regulations and provisions in force, current professional standards and in accordance with the stipulations set out in our general sales conditions. The information detailed in the present technical data sheet is given by way of indication and is not exhaustive. The same applies to any information provided verbally by telephone to any prospective or existing customer.