



## POLYURETHANE FOAM DENSITY 10 - 15 KG/³

The product I 2008 is a system composed of two components (polyol and isocyanate) produces polyurethane foam of an applied density from 10 to 20 kg/m<sup>3</sup>, is suitable for acoustic isolation uses.

It is free of substances harmful to the ozone layer and gases that promote the greenhouse effect (no contains HFCs, HCFCs, VOCs, etc ...).

## USES

It is specifically designed for thermal insulation in construction, industry, farming or agricultural facilities. In applications ceilings, interior chambers facade, ventilated facades.

Applied density	10 ~ 15 kg/m <sup>3</sup>
Thermal conductivity	0,039 ± 0,002 W/m·k
Fire reaction	EUROCLASS E



## APPLICATION'S CONDITION

TECNOFOAM I-2008 system do not need the addition of additives for use. The machine used for TECNOFOAM I-2008 system processing has to be capable of dosing components (polyol and isocyanate) in equal proportions by volume (+ / - 2%) and mixing at pressures between 60 and 120 kg/c<sup>2</sup>. The temperature of the machine, heaters and hoses should be set between 25 and 60 ° C depending on environmental conditions, to obtain an optimal mix.

In addition of changing ostensibly product performance, weather conditions, has influence on the quality of the foam in the spraying works. Therefore it is important that the temperature and the substrate surface, has to be between 5 °C and 40 °C, otherwise there may be areas with poor compliance, or dimensional changes more than expected. The substrate must be clean and dry and the humidity should be below 80%, because a high humidity can cause density alterations of the final product, and less adhesion to the substrate. Wind speed during the application must not exceed 30 km / h to avoid high consumption of materials; the irregular surface spraying could train particles that can cause serious problems of dirt surrounding the job place. During favorable environmental conditions, the adhesion of the foam, on the commonly used substrate, is excellent, provided they are clean, dry and free of rust.

In all cases, before applying the foam is needed to perform an adhesion small test to ensure good fixation. In applications with high temperature gradients place a vapor barrier on the warm side of insulation system to prevent condensation. Smooth metal surfaces must be protected by an anti-corrosion primer before being covered with foam. On smooth surfaces without pores, galvanized steel, polypropylene, etc. ... should be primed for better adhesion and



union of insulation system.

## STORAGE REQUIREMENTS

Storage temperature should be between 10 and 25 ° C. Containers (full or empty) should not be exposed to direct sunlight or heat sources such as stoves, radiators, etc. ... because they can generate pressure inside ,and will be dangerous its handling or manipulation . The components are moisture sensitive, must always be kept in airtight containers and be protected against the ingress of moisture at all times to avoid disruptions in the final product or rendered useless for treatment.

## EXPIRY

Polyol and isocyanate components have an optimal time established for use in which retain their physical and chemical properties favorable for further processing and obtaining foam which has all its properties. Once this period is ended, it appears a possible destabilization and gradual degradation of all chemical and physical characteristics of the final product will be more pronounced as time elapsed. In proper storage conditions and in original packaging, the optimal period for consumption is 3 months for polyol and 6 months for isocyanate from manufacture's time.

## EXPOSURE CONTROLS AND PERSONAL PROTECTION DURING MANUPILATION

Respiratory Protection: When handling or spraying use an air-purifying respirator. Skin protection: Use rubber gloves, remove immediately after contamination. Wear clean body-covering. Wash thoroughly with soap and water after work and before eating, drinking or smoking. Eye / Face: Wear safety goggles to prevent splashing and exposure to particles in air. Waste: Waste generation should be avoided or

minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.

## PROPERTIES OF APPLIED FOAM AND COMPONENTS

Mixture ratio of components

- Polyol I-2008 : 100 (by volume)
- ISOCYANATE : 100 (by volume)

Reactivity (in laboratory conditions)

Cream time	5 seconds (UNE-92120-1)
Rise time	12 seconds (UNE-92120-1)
Free density Glass	10 to 15 grams / liter (UNE-92120-1)

### Applied foam characteristics

- Thermal conductivity (transfer at 10 ° C): 0.035 (W / m • K) (UNE in 12667: 2002) (aged 1 year)
- Compression performance, compression strength : 213 kPa (UNE in 826:1996)
- Density applied: from 15 to 20 kg/m<sup>3</sup> (UNE EN 1602) Reaction to fire: EUROCLASS E (UNE in 13501-1:2007 + A1: 2010)
- Dimensional stability; < 0,5% volume (UNE EN 1604)



**ACOUSTIC ABSORPTION COEFFICIENT**

(UNE-EN 20354:1993)

Frequency (Hz)	TECNOFOAM I-2008	CONVENTIONAL PU Foam
125	0.20	0.12
250	0.40	0.18
500	0.80	0.27
1000	0.60	0.19
2000	0.40	0.62
4000	0.50	0.22
Coefficient (average)	0.50	0.32

