

**TECNOFOAM I-2008 - POLYURETHANE FOAM FOR INJECTION (APPLIED DENSITY 12~18 KG/M³)**

It is water-borne, open-cell injection polyurethane foam system for thermal insulation, is specifically formulated to apply foam with applied density around 12~18 kg/m³. Its application must be carried out by the specific equipment by mixing Tecnofoam I-2008 (polyol side) and Tecnofoam G-2049.I (isocyanate side). The blowing agent is water.



USES

For application in the following situations:

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

NOTE: call our technical department about the application to other substrates or scopes of use

Applied density	12~18 kg/m³
Thermal conductivity	0.038 W/m·k
Gel time	10 ~ 14 secs
Cream time	45 ~ 55 secs
Tack-free time	85 ~ 115 secs
Fire reaction	Euroclass F
Close-cell content	<20% (CCC1)
Application method	Specific equipment



COLORS

	Yellow
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GENERAL SPECIFICATIONS

- It is an open-cell spray polyurethane foam (SPF), for thermal insulation, easy to apply and to protect all the internal surfaces of the building
- The application and training is done by our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar
- The expansion agent is water. The gas occluded in the internal cells of the product formed by CO₂, proceeds from the reaction between the water contained in the polyol and the isocyanate. The agent of expansion is water. It is free from harmful substances for the ozone layer, so it does not promote its winter effect (NO contains HFCs, HCFCs, VOCs, etc.) and does not emit environmental substances that have been installed. The system is 100% recyclable by the media Mechanics respect the environment. No gas capture is required for recycling and/or destruction.
- Do not apply on terraces, balconies, roofs, or in situations of exposure to the outside
- The properties of the polyurethane foam system allow it to adhere to any surface such as concrete, ceramics, metals, polyurethane foam, wood, acrylic paints, plywood, fiber cement, interior masonry, exterior drywall (checking on another type of surfaces).
- It forms a continuous coat without joints preventing the formation of "heat bridges" and providing an optimum thermal insulation surface with high thermal insulation parameters
- The thermal conductivity coefficient remains unchanged from the application and along with the product life.
- The applicator/contractor must know and respect the local regulations according to the use, taking into account the physical and chemical characteristics of the polyurethane foam system to be used and comply with all applicable and appropriate guidelines for processing and handling guidelines.

PACKAGING

Metal drums of 215 kg for the polyol, and 250 kg for the isocyanate.

SHELF LIFE

- POLYOL COMPOUND: 4 months (we recommend stirring before use and also during the application)
- ISOCYANATE COMPOUND: 6 months

Always store the drums before use at a temperature between 5 and 35 °C (41-95 °F), always in dry areas, without the possibility of moisture entering, and without direct contact with the sun or heat sources, otherwise they may be affected its reactivity and performance. Low ambient temperature increase the viscosity of the polyol, which makes it difficult to mix and apply, and can generate crystallization in the isocyanate, which can cause its mixing ratio to vary and the consequent internal problems in the mixing and application equipment .

APPLICATION METHOD

In general, you should take the following factors:

- The application of this spray polyurethane foam system should be performed under non-presence of moisture or water from the support stand on which to apply either at the time of application as a posteriori.
- The substrate must be clean and free of dust, oils or greases.
- The ideal drum temperature for processing Tecnofoam (Polyol and isocyanate) is 20-30°C.
- To achieve optimum parameters, you must mix, before use, the polyol minimum 10 minutes or more depending on the age of the material.
- Inject the already mixed product through the dosing equipment, through perforations located in the element to be isolated.
- Keep in mind that the expansion time of the two components, once mixed, is 45-50 seconds.



- Repeat this action as many times as necessary to fill the entire element.

APPLICATION REQUIREMENTS (SPRAY EQUIPMENT)

For the formation, it is necessary to mix the two initial liquid components, isocyanates and polyols with our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar (proper maintenance and cleaning it is recommended).

The general parameters for this material will be the following:

- Isocyanate heater temperature: 30~35 °C (86°F to 95°F)
- Polyol heater temperature: 50~60°C (122°F to 140°F)
- Hose temperature: 40~45°C (104°F to 113°F)
- Working pressure: 1.200 - 1.600 psi (75-110 bar)
- Mixing ratio(recommended): GU-0087-3/GU-0087-4/GU-0087-5

These temperature and pressure parameters must be valued, ratified or slightly varied by the applicator, depending on the conditions of each climatic zone, weather situation or according to the specifications of the projection equipment. It is the responsibility of the owner / applicator of the equipment to keep it in perfect condition in order to maintain the correct mixing ratio of the two components that Tecnopol delivers separately, by periodically updating its maintenance controls. During the execution of the application, it may be necessary to correct these parameters according to changing external conditions, as well as to verify the correct operation of the machine (pressure and temperature).

HEALTH AND SAFETY

These safety recommendations for handling, are necessary for the implementation process as well as in the pre and post, on exposure to the loading machinery.

- 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 the air.
- Waste: Waste generation should be avoided or minimized.
- Incinerate under controlled conditions in accordance with local laws and national regulations.
- Re-occupancy of the work site without respiratory equipment is minimum 24 hours providing the correct ventilation for the area sprayed.
- Contractors and applicators must comply with all applicable and appropriate guidelines for storage and safety guidelines.

Consult the material and safety data sheet of the products of the system.



COMPOUND CHARACTERISTICS

CHARACTERISTIC	POLYOL	ISOCYANATE(MDI)
Viscosity	1,000 mPa.s	210 mPa.s
NCO content ISO 14896	---	31 %
Specific weight	1.06 g/cm ³	1.23 g/cm ³
Mix ratio by volume	100	100
Mix ratio by weight	100	115

Results performed in the laboratory at 25°C (77°F) and 50% RH, under controllable conditions. These values may vary depending on the application, climatology, or substrate conditions.

APPLIED SYSTEM CHARACTERISTICS (REACTION)

CHARACTERISTIC	VALUE
Cream time EN 14315-1	10~14 secs
Gel time / tack-free time EN 14315-1	45~ 55 secs / 85~115 secs
Free-rise density / Applied density	10kg/m ³ / 12kg/m ³
Closed-cell content ISO 4590	<20% (CCC1)
Thermal conductivity value EN 12667	0.038 W/mK
Reaction to fire EN 13510-1	Euroclass F

Results were performed in the laboratory at 23°C (72°F) and 50% RH, under controllable conditions. These values may vary depending on the application, climatology, or substrate conditions.

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