TECNOFOAM G-2040 FR - SPRAY POLYURETHANE FOAM (SPF) SYSTEM FOR THERMAL INSULATION(APPLIED DENSITY ±40 KG/M³). FIRE REACTION M1.

TECNOFOAM G-2040 FR (technically TECNOFOAM S-401) polyurethane system for thermal insulation, is specifically formulated to apply foam with applied density around (±40~50 kg/m³), and M1 fire reaction is required. Its application has to be done by specific reactor equipment. The blowing agent is water

USES

The polyurethane foam system TECNOFOAM G-2040 FR can be used in these situations:

- It's specifically designed for thermal insulation in construction, industry, farming or agricultural facilities.
- In applications where flat roofs, balconies, terraces, indoor floors and installations, indoor facades, all this with compression needs on the surface, and reaction to fire M1.

NOTE: For other applications / situations, please, consult our technical department

applied density	40~50 kg/m³
thermal conductivity	0,030 ± 0,002 W/m.K
fire reaction	M1
application	spray equipment

GENERAL FEATURES

- TECNOFOAM G-2040 FR (technically TECNOFOAM S-401) is a product with high insulating capacity, easy to apply covering all surfaces
- the application and training is done by our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar
- the blowing agent is water
- apply TECNOFOAM G-2049 FR when an M1 fire reaction is required
- it is free from harmful to the ozone layer, so do not promote the greenhouse effect (NOT contain HFCs, HCFCs, VOCs, etc ...).
- TECNOFOAM G-2040 FR system is 100% recyclable by mechanical means friendly to the environment
- no gas collection for recycling and/or destruction is required

- the heat transfer coefficient is unchanged from ? placement and along the product life unlike the foam produced from gas low boiling.
- it does not emit any substance to the environment once installed.
- the properties of this polyurethane foam system allow it to adhere to any surface such as concrete, ceramic, metal, polyurethane foam, wood, acrylic paints (checking the situation of areas recommended).
- the application of TECNOFOAM G-2040 FR is completely continuous, instead of the classic non-continuous thermal insulation material, saving any kind of union between applications, and providing an optimum thermal insulation surface with high thermal insulation parameters
- it has CE mark on the basis of a declaration of performance DoP prepared in accordance with EU regulation 305/2011. www.tecnopol.es or statement available on demand.

PACKAGING

Metal drums of 250 kg for each product (polyol and isocyanate)

SHELF LIFE

POLYOL COMPOUND: 3 months

ISOCYANATE COMPOUND: 6 months

Temperature within 5 ºC ~ 35 ºC, provided it is stored in a dry place, nondirect contact with the sun.

APPLICATION METHOD

In general, you should take the following factors:

- the application of polyurethane foam system TECNOFOAM G-2040 FR 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
- in applications with high-temperature gradients, a vapor barrier is placed on the warm side of the insulation to prevent condensation
- perform successive layers of a thickness 1.5~2 cm each, until the desired thickness
- TECNOFOAM G-2040 FR adheres firmly on most common materials such as wood, plasterboard, steel, OSB, plywood, cement, inside masonry exterior plaster panels, and construction itself.
- not shrinkage after performing the expansion.
- reactivity times (in laboratory conditions):
    - REACTING TIME: 3-6 seconds
    - EXPANDING TIME: 9-12 seconds

APPLICATION REQUIREMENTS (SPRAY EQUIPMENT)

For the formation, it is necessary to mix the two initial liquid components, isocyanates and amines by 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:

- Heater isocyanate temperature: ±40-45 ºC
- Heater amines temperature:±40-50ºC
- Hose temperature:±40-50ºC
- Pressure:1.700-2.000 psi

These temperature and pressure parameters have to be valued, ratified or be varied by the applicator, depending on the conditions of each climate zone, weather situation or as projection equipment specifications.

HANDLING

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.

Anyway, consult the material and safety data sheet of the product.

COMPLEMENTARY PRODUCTS

The TECNOFOAM system may be complemented with the following products as a means of protection or to improve its physical-mechanical properties depending on its exposure, the desired finish or the type of substrate.

TECNOCOAT 2049 LV: pure low viscosity polyurea. Approximate consumption 1,5 kg/m²

DESMOPOL: single component polyurethane membrane for waterproof. Approximate consumption 1,5 kg/m²

TECNOTOP 2C: two component colored aliphatic polyurethane resin used to protect against UV rays, to use after DESMOPOL.

TECHNICAL DATA (ACCORDING TO DECLARATION OF PERFORMANCE)

Essential characteristics	Performance	Harmonized technical specification
Fire reaction	M1	UNE 23721:1990
Water absorption (short term by partial immersion)	Wp <0,2 kg/m²	EN 1609
Thermal resistance	See performance chart	EN 12667:2002
Water vapor permeability	Water vapor resistance factor: μ=70	EN 12086
Compression	200 kPa	
Compressive strength	No performance declared (NPD)	EN 826
Durability of reaction to fire against aging/degradation	Reaction to fire does not decrease with time	EN 14315·1:2013
Durability of thermal resistance against aging/degradation	See performance chart	EN 14315·1:2013
Durability of the compressive strength against aging/degradation	Compressive strength does not decrease with time	EN 14315·1:2013
Continuous glowing combustion	No harmonized test method available	EN 14315·1:2013

To obtain more information, consult the full document Declaration of Performances of the particular system (consult our technical department).