



TECNOFOAM G-2050 - SPRAY POLYURETHANE FOAM (SPF) SYSTEM FOR THERMAL INSULATION (APPLIED DENSITY ± 50 KG/M³)

TECNOFOAM G-2050, spray polyurethane foam system (SPF) for thermal insulation is specifically formulated to apply foam with applied density around (± 50 – 60 kg/m³). Its application must be carried out by the specific reactor equipment by mixing Tecnofoam G-2050 (polyol side) and Tecnofoam G-2049.I (isocyanate side). The blowing agent is water.

It has CE marking on the basis of a statement made DoP Declaration of Performance (DoP) under the European Norm EN-14315-1:2031.



USES

The polyurethane foam system TECNOFOAM G-2050 can be used in these situations:

- It's specifically designed for thermal insulation in construction, industrial, farming or agricultural facilities.
- In applications where flat roofs, interior floors, and installations with a floor heating system, all those with high compression needs on the surface. (including vehicular traffic)

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

| | |
|------------------------|---------------------------|
| applied density | 50 ~ 60 kg/m ³ |
| thermal conductivity | 0,030 W/m-K |
| stirring time at 20°C | 2 ~ 5 secs |
| gel time at 20°C | 5 ~ 12 secs |
| tack-free time at 20°C | 12 ~ 15 secs |
| fire reaction | Euroclass E |
| close-cell content | <80%(CCC2) |
| mix ratio (vol.) | 100/100 |
| application method | spray equipment |



COLORS

| | |
|--|--------|
| | Salmon |
| | Green |



GENERAL FEATURES

- TECNOFOAM G-2050 is a product with high insulating capacity, easy to apply to cover all surfaces using our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar
- 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 blowing agent is water
- it is free from harmful to the ozone layer, so do not promote the greenhouse effect (NOT contain HFCs, HCFCs, VOCs, etc ...); it does not emit any substance to the environment once installed
- TECNOFOAM G-2050 system is 100% recyclable by mechanical means friendly to the environment. , and no gas collection for recycling and/or destruction is required
- the thermal conductivity (?) coefficient remains unchanged from the application and along with the product life.
- the properties of this spray 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).
- It is regulated under the European standard EN 14315-1: 2013 "Thermal insulating products for applications in buildings, rigid polyurethane foam (PUR) products", for which it has CE marking based on a DoP Declaration of Performance.

PACKAGING

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

SHELF LIFE

POLYOL COMPOUND: 3 months (stir before the mixing)

ISOCYANATE COMPOUND: 6 months

The temperature within 5 °C ~ 35 °C, provided it is stored in a dry place, with no direct contact with the sun.

APPLICATION METHOD

In general, you should take the following factors:

- the application of polyurethane foam system TECNOFOAM G-2050 should be performed under the 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
- minimum recommended surface temperature: 5°C
- in applications with high-temperature gradients, a vapor barrier is placed on the warm side of the insulation to prevent condensation
- it is recommended to waterproof the polyurethane foam
- perform successive layers of a thickness 2~3 cm each one
- wait to apply the second layer, until minimum temperature on the first layer 40-50°C
- TECNOFOAM G-2050 adheres firmly to most common materials such as wood, plasterboard, steel, OSB, plywood, cement, inside masonry exterior plaster panels, and construction itself.
- no shrinkage after performing the expansion.
- reactivity times (in laboratory conditions):
 - REACTING TIME: 2-5 seconds
 - EXPANDING TIME: 5-12 seconds



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:

- Heater isocyanate temperature: $\pm 40-45$ °C
- Heater amines temperature: $\pm 45-55$ °C
- Hose temperature: $\pm 45-50$ °C
- Pressure: 1.700-2.000 psi (120 to 140 bar)
- Mixing chamber (recommended): GU-07008-2

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 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 them 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 ~ 2 kg/m²

TECNOTOP 1C/2C: colored aliphatic resin used to protect against UV rays, to use after DESMOPOL or TECNOCOAT membranes

COMPOUND CHARACTERISTICS

| characteristic | POLYOL | ISOCYANATE(MDI) |
|---|-------------------|-----------------|
| Nº OH DIN 53240-2 | 180 ~ 220 mgKOH/g | ---- |
| Viscosity at 25°C BROOKFIELD VISCOSIMETER | <600 mPa.s | 210 mPa.s |
| Water content ISO 14897 | 2,7 ~ 3,0 % | ----- |
| NCO content ISO 14896 | --- | 31 % |



| | | |
|-------------------------|------------------------|------------------------|
| Specific weight at 25°C | 1,07 g/cm ³ | 1,23 g/cm ³ |
|-------------------------|------------------------|------------------------|

APPLIED SYSTEM CHARACTERISTIC (REACTION)

| CHARACTERISTIC | VALUE |
|---|-------------------------|
| Stirring time at 20°C | 2 ~5 seg |
| Gel time at 20°C | 5 ~12 seg |
| Tack free time at 20°C | 12 ~15 seg |
| Density free rise at 20°C | 35~45 kg/m ³ |
| Closed-cell content ASTM 2856 | <80%(CCC2) |
| Thermal conductivity value t a20°C EN-12667 | 0,030 W/mK |
| GWP(Global Warming Potential) | 1 |
| ODP (Ozone Depletion Potential) | 0 |
| VOC (volatile organic compounds) ISO 16000-6 | Class C |
| Compression strength | 320 KPa |
| Fire reaction EN-13501 | Euroclass E |
| Range of temperatures (substrate/ambiance) | 0 ~ 40°C |
| Max. relative humidity | 90% |
| Max. substrate humidity (dew point) | 0 |

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

The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are only intended for sale to industrial and commercial customers. The customer assumes full responsibility for quality control, testing, and determination of the suitability of products for its intended application or use.

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