TECNOFOAM G-2020 - SPRAY POLYURETHANE FOAM (SPF) SYSTEM FOR THERMAL INSULATION(APPLIED DENSITY ±20 KG/M³)

TECNOFOAM G-2020, spray polyurethane foam system (SPF) for thermal insulation is specifically formulated to apply foam with applied density around (±18~24 kg/m³). Its application must be carried out by the specific reactor equipment by mixing Tecnofoam G-2020 (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 spray polyurethane foam system TECNOFOAM G-2020 can be used in these situations:

- a complete and continuous system of thermal insulation in construction, industrial, farming, or agricultural facilities.
- in applications inside ceilings, interior chambers facade, ventilated facades, partitions in general.

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

applied density	18~24 kg/m³
thermal conductivity	0,031 W/m·K
stirring time at 20ºC	2 ~ 5 secs
gel time at 20ºC	5 ~ 12 secs
tack-free time at 20ºC	12 ~ 15 secs
fire reaction	Euroclass E
mix ratio (vol.)	100/100
close cell content	<80%(CCC2)
application method	spray equipment

COLORS

	Salmon
	Green

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GENERAL FEATURES

- TECNOFOAM G-2020 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-2020 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

Temperature within 5 ºC ~ 35 ºC, 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-2020 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: 5ªC
- 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 4~5 cm each one
- wait to apply the second layer, until minimum temperature on the first layer 40-50ºC
- TECNOFOAM G-2020 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: ±40-45 ºC
- Heater polyol temperature:±45-55ºC
- Hose temperature:±45-50ºC
- 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 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 ~ 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 25ºC BROOKFIELD VISCOSIMETER	<600 mPa.s	210 mPa.s
Water content ISO 14897	3,7 ~ 3,9 %	-----
NCO content ISO 14896	---	31 %

Specific weight at 25ºC	1,07 g/cm³	1,23 g/cm³

APPLIED SYSTEM CHARACTERISTIC (REACTION)

CHARACTERISTIC	VALUE
Stirring time at 20ºC	2 ~5 seg
Gel time at 20ºC	5 ~12 seg
Tack-free time at 20ºC	12 ~15 seg
Density free rise at 20ºC	14 ~20 kg/m³
Closed-cell content ASTM 2856	<80 %(CCC2)
Thermal conductivity value t a20ºC EN-12667	0,031 W/mK
GWP(Global Warming Potential)	1
ODP (Ozone Depletion Potential)	0
VOC (volatile organic compounds) ISO 16000-6	Class C
Fire reaction EN-13501	Euroclass E
Range of temperatures (substrate/ambiance)	0 ~ 40ºC
Max. relative humidity	90%
Max. substrate humidity (dew point)	0

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