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TECNOFOAM G-2048		REFERENCE	G-2048+G-2049.I	
		VERSION	v.5	
		REVISION DATE	03/05/2013	
COMMENTS	The information in this data sheet is based on our current knowledge and the EU laws and national. The product should not be used for purposes other than those specified. It is always the responsibility of the user to take the necessary measures to comply with the requirements of current legislation. The information contained in this form should not be considered as a guarantee of its properties.			

## DESCRIPTION:

The product **TECNOFOAM G-2048** is a foam system composed of two components (polyol and isocyanate) produces polyurethane foam of an applied density from 35 to 45 kg/m<sup>3</sup>.

The foam obtained **TECNOFOAM G-2048** system is 100% recyclable; it does not requires gas collection to its processing during recycling or destruction operation

The expansion agent is water.

The heat transfer coefficient  $\lambda$  is unchanged from the collocation of the system and throughout the duration of the product, unlike the foam produced from gas of low boiling point.

It emits no substance in the environment once installed. Not contains fibres or bio-harmful products or similar.

Offers certification BVC ( Bureau Veritas Certification ), products based in polyurethane, for the manufacture of polyurethane rigid foam produced in situ.

## ACCEPTED USES:

It's specifically designed for thermal insulation in construction, industry, farming or agricultural facilities.

In applications where flat roofs, interior floors and installations with floor heating system, all this with high compression needs on the surface.

## APPLICATION:

**TECNOFOAM G-2048** system does not need the addition of additives for use. The machine used for **TECNOFOAM G-2048** 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/cm<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.

## PRESENTATION FORMATS:

Metal drums of 250 kg each component.

## 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



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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 6 months for polyol and 12 months for isocyanate from manufacture's time.

### 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.

### HANDLING AND TRANSPORT:

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 air.

Waste: Waste generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.

Anyway, consult the safety data sheet of the product, are publicly available.

### APPLICATION PROCEDURE:

The products should be used with proper adjustment of temperatures before use. To ensure a good reactivity and adapt so that the mixture viscosity is correct.

Projection equipment, type mixture A: B:

- mixture1 ratio: 1 in volume.
- operating temperature of the machine: 45 ~ 55 ° C.
- type of equipment: **TECNOFOAM G-2048** can be applied with standard application equipment polyurethane foam

### COMPLEMENTARY PRODUCTS:

The **TECNOFOAM G-2048** 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.

PRIMER PU-1050- PRIMER EPw-1070-PRIMER PUC-1050: These primers are applied on the substrate beforehand to improve bonding and level the surface, as well as regulating the humidity in the substrate (see permitted levels in their technical specifications).

TECNOCOAT P-2049: pure polyurea for coating and protect. Yield:1,5 kg/m2.

TECNOTOP 2C-: dual-component coloured aliphatic polyurethane varnish used to protect roofs and floors or



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ground against UV rays when there is no other protection.

DESMOPOL: monocomponent polyurethane membrane.

You can use as a waterproofing system or as a UV sunrays protection. Yield: 1,5 kg/m2.



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### PROPERTIES OF APPLIED FOAM AND COMPONENTS:

MIXTURE RATIO OF COMPONENTS	
POLYOL G-2048:	100 (by volume)
ISOCYANATE G-2049.I	100 (by volume)
COMPOSITION INFORMATION	
Polyol Indice OH:	190 ~ 220 ( internal method)
Polyol water content:	4,4 ~ 5 (UNE-92.120-1)
Isocyanate NCO:	30 ~ 33 (UNE-92.120-1)
REACTIVITY (IN LAB. CONDITIONS)	
Cream time	2 ~ 5 seconds (UNE-92.120-1)
Rise time	9 ~ 12 seconds (UNE-92.120-1)
Free glass density	29 ~ 33 g/l (UNE-92.120-1)

### PROPERTIES :

CONCEPT	VALUES
Dimensional changes at +70°C, 90% RH	<4% ( UNE EN 1604:1997 )
Dimensional changes at -20°C, 50% RH	<1 % ( UNE EN 1604:1997 )
Thermal conductivity at 10 °C	0.031 ±10% ( W/m <sup>2</sup> .K ) (UNE EN12667:2002 )
Compression strength ( 10% of compression )	> 160 KPa ( UNE EN 826:1996)
Compression strength ( elasticity )	> 4.500 KPa ( UNE EN 826:1996)
Applied density	35 kg/m <sup>3</sup> ( low limit ) , 45 kg/m <sup>3</sup> ( high limit ) (UNE EN 92120-1:1998 Anexo C )
Fire reaction	Euroclass E ( UNE EN 13501-1:2007 +A1:2010 )

