

Phono Spray
S-907

Isocianato
H

DESCRIPTION

Phono Spray S-907 is a thermo acoustic two-component Polyurethane System comprising polyol and isocyanate. The system is "in situ" sprayed and medium-density (about 55-65 kg/m³) rigid foam is obtained. It is an open cell foam with acoustic absorption properties. The application of **Phono Spray S-907** in a constructive solution improves its acoustic insulation.



Phono Spray S-907 system does not contain ozone depleting blowing agents (CFC and HCFC).

COMPONENTS

COMPONENT A: **Phono Spray S-907**
Mixture of polyols, containing catalysts and flame-retardants

COMPONENT B: **ISOCIANATO H**
MDI polymeric (diphenyl methane diisocyanate)

USES

The **Phono Spray S-907** system is applied with a high-pressure spray equipment, which is heating outfitted, with a mixing ratio of 1:1 in volume. The system main application is the improvement in acoustic insulation, especially noises to impact between horizontal divisors.

Application advantages:

- Total suppression of acoustic bridges. This system does not present joints or gaps since it is a continuously applied product.
- Good adherence to the substrate. Nor glues or adhesives are needed for its installation.
- Mobility. It is possible to get quickly to any site without having to transport or store bulky products like other insulating materials

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CONDITIONS OF USES

It is recommended to apply **Phono Spray S-907** in the minimum possible layers to achieve the desired thickness.

BEFORE BEING LOADED INTO THE MACHINE, COMPONENT A (Phono Spray S-907) MUST BE HOMOGENISED FOR 5 - 10 MINUTES IN A SUITABLE MECHANICAL MIXER (above 1500rpm).

The adherence of **Phono Spray S-907** system is excellent with materials used in construction (concrete, ceramic, laminate plaster, wood, etc.) providing that it is clean, dry and free of dust and oil.

The yield of the foam is influenced by different factors, which are listed below:

- Weather conditions: temperature, humidity, wind, etc...
- Substrate surface conditions: temperature and humidity.
- Adjustment of the equipment: appropriate ratio.

GENERAL INSTRUCTIONS

It is recommended to apply a direct single layer of **Phono Spray S-907** if the thickness is 10-20 mm, or more layers if the thickness is higher than 20 mm

The system is slightly slower than the thermal insulation **Poliuretano® S Spray** so you must expect a few minutes before making any verification of the quality of the foam obtained

The recommended hoses temperature is in the range of 35-45°C depending on the weather conditions. The minimum recommended substrate temperature during spraying is 5°C.

EQUIPMENT CLEANING

It is recommended to assign exclusive machines for the application of **Phono Spray S-907** in order to avoid any source of contamination that may come from another polyurethane system used in the same equipment.

If it is not possible to use exclusive equipment for the application of **Phono Spray S-907**, it is recommended to use different hoses for each system, reducing with this the possibility of contamination between different materials. For these cases, the cleaning procedure to begin using **Phono Spray S-907** is detailed as follows:

- 1) When a few square meters remain from being sprayed with the thermal insulation system, the polyol pump must be changed from one drum to the other and start pumping **Phono Spray S-907**. One product will displace the other inside the hose while the remaining area is sprayed with the thermal insulation.
- 2) Briefly (depending on hose length) **Phono Spray S-907** will start going out from the gun. It's easily detected because **Phono Spray S-907** is grey.
- 3) When **Phono Spray S-907** starts to foam it is advisable to reject the initial foam, it could still be contaminated with the thermal insulation product **Poliuretano® S Spray**.
- 4) When it is proved that the product is correctly formed (flexible tact) it is possible to start with the application.

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Carrying out the change from one product to the other in this way, generation of residues will be avoided.
When the thermal insulation product **Poliuretano® S Spray** is going to be sprayed again, it is necessary to repeat the process changing a product by the other and checking the correct formation of the foam, this time it must be grey.

COMPONENTS CHARACTERISTICS

Characteristics	Units	H	S-907
Specific weight 25°C	g/cm ³	1,23	1,03
Viscosity 25°C	mPa.s	230	1200
NCO content	%	31	-

SYSTEM SPECIFICATIONS

Test beaker measurements at 22°C at the indicated mixing ratio and according to our Standard Test (MAN-S01).

Mix Ratio A / B: 100/100

Characteristics	Units	S-907
Cream time	s	3.5 ±1.5
Gel time	s	9 ±2
Tack free time	s	12 ±2
Free rise density	g/l	43 ±3

FOAM PROPERTIES

Characteristics		Units	S-907
Apparent Core Density	EN 1602	kg/m ³	55 ±10
Closed Cell Content	ISO-4590	%	<20
Thermal resistance and thermal conductivity	EN 12667 EN 12939		See performance chart
Reaction to fire	EN 13501-1	Euroclass	F

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Water absorption (W_p)	EN 1609	Kg/m ²	≤1
Water vapour resistance factor (μ)	EN 12086	-	≥5
Sound Absorption	UNE EN 20354:1993	-	0,32
Dynamic Stiffness s'	UNE EN 290501	MN/m ³	17,76*
Determination of thickness of floating floor insulation products	UNE-EN 12431:1999	mm	1.6 (thickness:20mm)**
		mm	3,1(thickness:30mm)**
Determination of compression creep Expected relative deformation to 10 year	UNE-EN 1606:1997	mm	2,31***
		%	7,0***

* Certified by APPLUS file number: 08/32309500
 * Certified by CEIS; file number LAT0011-10-1Rv1.
 * Not declared performance

Performance chart

Sprayed insulation foam product CCC1system. Diffusion open faces.

e_p	10	15	20	25	30	35	40	45	50
λ_D	0,037	0,037	0,037	0,037	0,037	0,037	0,037	0,037	0,037
R_D	0,25	0,40	0,50	0,65	0,80	0,90	1,05	1,20	1,35

e_p Thickness; mm
 λ_D Declared aged thermal conductivity; (W/mK)
 R_D Thermal resistance level; (m²K/W)

FIRE REACTION TEST

Characteristics	Euro class
Reaction to fire	UNE EN 13501-01 F

ACOUSTIC ABSORPTION TEST

It have been carried out acoustic isolation test to air noise as the norm UNE-EN ISO 140-3:1995 and to impact noise as the norm UNE-EN ISO 140-6:1999 and UNE-EN ISO 140-8:1998 on a floating floor consisting mortar and **Phono Spray S-907** sprayed on slab of concrete standard.

DESCRIPCIÓN	ΔL (dB)	Lnw (dB)	Rw (dBA)

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Slab of concrete standard 15 cm + Phono Spray S 907 2 cm + mortar 5 cm	14	60	56
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Certificate issued by the acoustics of the area of Quality Control Laboratory of the Basque Government (Vitoria). Test report 90.2632.0-IN-CT-08/16 I and II.

ACOUSTIC INSULATION TEST IN SITU

DESCRIPTION SEPARATE ELEMENTS	LnTw (dB)
FORGED + Phono Spray S 907 2 cm + Mortar 5 cm	<65*
FORGED + Phono Spray S 907 3 cm + Mortar 4 cm	<65*

(*) Values estimated as UNE-EN ISO 140-7.

STORAGE RECOMMENDATIONS

Components A and B are sensitive to moisture, and must be stored in hermetically sealed drums or hermetic containers. Storage temperature must be kept between +15°C and +25°C. Avoid lower temperatures that may build up crystallizations in the isocyanate, as well as higher temperatures that may alter the polyol and produce swelling of the drum.

Properly stored, the shelf life is 3 months for the Component A (polyol) and 9 months for the Component B (isocyanate).

SAFETY RECOMMENDATIONS

Properly handled **Phono Spray S-907** system does not present significant risks. Avoid contact with eyes and skin. The instruction given in the Safety Data Sheet must be followed during the manufacturing and handling of the system.

SUPPLY

Normally, the product is supplied in non-returnable steel drums of 220 litres (blue for Component A and black for Component B)

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ANNEX: APPLICATION TROUBLESHOOTING

Our Technical-Commercial customer service will give you advice for any queries you may have on the preparation of this product. Nevertheless, some of the problems that may appear during the process are outlined below:

Problem	Possible cause	Solution
Uneven atomisation.	Needle /gun wrongly adjusted or dirt in the mixing chamber.	Adjust the position Clean the chamber.
Coloured streaks.	Bad mixing due to components obstruction or differences in viscosity.	Check pressures, fix obstruction. Adjust and raise temperatures.
Poor and closed atomisation.	High component viscosities. Cold temperature.	Rise temperatures and pressures.
Atomising too open and mist formation.	Excess of air in gun tip. Excessive pressure of mixing.	Reduce air passage. Reduce a little the pressure.
The material reacts slowly and it falls off.	Cold surface.	Rise hose heating.
Excessively fast material, uneven finishing with mist.	Pressure excess.	Reduce the air pressure in the gun and the mixing pressure.
The material is granulated as it gets on the surface and obstructs the gun.	Temperature excess.	Reduce hose heating.
Random shape bubbles are formed in the surface of the material.	It is applied on a surface that is too hot.	Wait the surface to cool down.
	Contamination with the formerly used product.	Let the presently used product to go through the hose a little bit more.