

Poliuretán® Spray
S-383-TL, S-383-TL-W

Isocianato
H

DESCRIPTION

Poliuretán® Spray are two-component polyurethane systems (polyol and isocyanate) formulated to obtain closed-cell rigid foams to be sprayed-in-place for thermal insulation.

Poliuretán® Spray systems contain approved ecological foaming agents (**HFCs**) that are not ODP (Ozone Depletion Potential) and are mainly used to obtain excellent thermal insulation.

The concentrations of emissions produced correspond to the class of emission A+ to standard CEN/TS 16516. Number of report: 392-2013-72702.



AENOR N CERTIFICATION



Poliuretán® Spray systems, composed of **S-353E-P** and **S-353E-W** have been awarded with the **AENOR N Certificate** to product quality for thermal insulation materials and their use in building, according to the contract number: 020/000186.

Declarado en EPBD Databank.



- COMPONENT A:** **Poliuretán Spray S-383-TL and S-383-TL-W**
Mixture of polyols containing catalysts, flame-retardants and foaming agents (HFC). It does not contain HCFC.
- COMPONENT B:** **ISOCIANATO H**
MDI polymeric (Methane diphenyl diisocyanate).

USES

The system **Poliuretán® Spray 383-TL** system is applied by spraying with high-pressure equipment fitted with heating, with a mixing ratio of 1:1 in volume. Their main applications are the thermal insulation of buildings, roofing, grounding, and terraces. Its smooth finish is particularly suitable for the application of thincoatings.

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CONDITIONS OF USES

The substrate must be clean, dry, and free of dust and grease to ensure perfect adhesion of the foam on the substrate, the substrate if metal is recommended to use suitable unappret and apply a minimum density of 40-50 kg/m³.

The thickness of layer is fully controllable and can be modified by varying the spin speed application and / or the mixing chamber of the gun, the thickness of the layers must be 10 to 50mm.

The foam performance is influenced by a great number of factors which are listed below:

- Weather conditions: temperature and humidity of the atmosphere and the substrate surface, as well as other environmental factors (wind, etc.)
- Adjustment of the machinery, a proper ratio.
- Application type: vertical, horizontal, roofs.
- Application process: coat thickness, varnish application.

Coat thickness is perfectly controllable and can be modified by varying the speed of application and/or the gun mixing chamber; thickness should be between 10 and 50mm. It must be taken into account that the foam performance is greater the lower the number of coats applied for the same thickness. Nevertheless, it is not convenient to apply thicknesses above 50 mm, in order to avoid blistering and problems that may take place due a high exothermic reaction.

On cold surfaces, the first coat takes longer to react and growth is not usually 100%. Whereby, in these cases, the first coat should be a varnish for a heat development, which should heat the substrate providing a proper foaming of the second coat.

The recommended temperature in hoses is 30 to 50°C, depending on the weather conditions. The minimum recommended substrate temperature during spraying is 5°C.

COMPONENTS CHARACTERISTICS

Characteristics	Units	H	S-383-TL/S-383-TL-W
Specific weight 25°C	g/cm ³	1,23	1,08
Viscosity 25° C	mPa.s	230	400
NCO content	%	31	-

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SYSTEM SPECIFICATIONS

Measured in a test beaker at 22°C, in the indicated mixing ratio. The test is carried out according to our standard (MANS-01) which is in accordance to the AENOR N CERTIFICATE method.

Mixing Ratio A / B: 100/100 in volume
 100/100 ± 4 in weight

Characteristics	Units	S-383-TL	S-383-TL-W
Cream time	s	3 ±1	3 ±1
Gel time	s	10 ±3	8 ±3
Tack free time	s	12 ±3	9 ±3
Free density	g / l	38 ±3	38 ±3

FOAM SPECIFICATIONS

Characteristics		Units	S-383-TL/S-383-TL-W
Apparent Core Density	EN 1602	kg/m ³	40-50
Closed Cell Content	ISO-4590	%	≥90
Bending Strength	UNE 53204	Kg/cm ²	3.5
Deflection		mm	15
Thermal resistance and thermal conductivity	EN 12667 EN 12939		See performance chart
Compressive strength	EN 826	KPa	≥ 200
Reaction to fire	EN 13501-1	Euroclass	E
Water absorption (W _p)	EN 1609	Kg/m ²	≤ 0,2
Water vapour resistance factor (μ)	EN 12086	-	≥ 80
Dimensional stability ⁽¹⁾	EN 1604	%	DS(TH)4
Varying thickness between 50 KPa and 2 KPa	EN 12431	mm	≤ (0,35+d _B /200)

⁽¹⁾Note 1: Not declared level

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Performance chart

Sprayed insulation foam product CCC4 system. Diffusion open faces.

e_p	25	30	35	40	45	50	55	60	65
λ _D	0,028	0,028	0,028	0,028	0,028	0,028	0,028	0,028	0,028
R _D	0,90	1,05	1,25	1,40	1,60	1,80	1,95	2,15	2,30
e_p	70	75	80	85	90	95	100	105	110
λ _D	0,028	0,028	0,027	0,027	0,027	0,027	0,027	0,027	0,027
R _D	2,5	2,7	3,00	3,20	3,40	3,55	3,75	3,95	4,15
e_p	115	120	125	130	135	140	145	150	155
λ _D	0,027	0,026	0,026	0,026	0,026	0,026	0,026	0,026	0,026
R _D	4,30	4,70	4,90	5,1	5,3	5,45	5,65	5,85	6,05
e_p	160	165	170	175	180	185	190	195	200
λ _D	0,026	0,026	0,026	0,026	0,026	0,026	0,026	0,026	0,026
R _D	6,25	6,45	6,65	6,85	7,05	7,25	7,45	7,65	7,85

e_p Thickness; mm

λ_D Declared aged thermal conductivity; (W/mK)

R_D Thermal resistance level; (m²K/W)

STORAGE RECOMEMNDATIONS

VERY IMPORTANT: Poliuretano[®] Spray system components are sensitive to humidity and must be stored in hermetically sealed drums or containers. **The storage temperature must be kept between +5 and +35°C.** Lower temperatures considerably increase the polyol viscosity, rendering it difficult to apply, and may build up crystallizations in the isocyanate. Higher temperatures may cause alterations in the polyol, loss of blowing agent, greater consumption and swelling of the drum, as well as uncontrolled foaming when the pump nozzle is placed into the drum. In order to avoid the latter, it is recommended to have the drums set-down for a certain period in a ventilated and fresh place before using them.

In case the drums are supplied with white plastic caps, special care should be taken during the handling of these caps as they are more fragile than the metallic ones and could be deformed.

To maintain the aforementioned characteristics of the systems, the drums should be hermetically sealed when not in use.

Properly stored, the self-life is 6 months for polyol; and 9 months for Component B (isocyanate).

SAFETY RECOMMENDATIONS

Poliuretano[®] Spray system does not represent significant risks if handled properly. 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).