

Urespray F-75

Isocianato F-75-N

DESCRIPTION

Urespray F-75 is a hybrid polyurethane elastomer system formed by the reaction of two fast-drying liquid components mixed by hot spraying equipment.

CHARACTERISTICS

Urespray F-75 is a comprehensive coating, without joins or overlaps, especially designed to protect insulating plastic foams. It offers excellent adhesion to PUR foam. Its fast curing time makes it suitable for vertical surfaces. Because it is sprayed on, it can be used to coat awkwardly shaped surfaces with a complete, resistant film that attaches perfectly to the substrate.

APPLICATIONS

Urespray F-75 is primarily used in construction and industrial applications as a coating for thermal insulation materials, mainly rigid polyurethane foam.

The product should be applied when the insulation is exposed to the elements, both indoors and outdoors, such as in cold stores, on farms, on tanks and on surfaces that require frequent washing, as well as when an aesthetic finish is required.

METHOD OF APPLICATION

The practical method of application is to use thermal spraying equipment, with the following characteristics:

- Pressure of components: 120–150 bar
- Pre-heater temperature: 40–60°C
- Hose temperature: 40-60°C

In cold environments, the temperature of the component pre-heaters should be adjusted to equalise pressures and ensure good mixing.

APPLICATION PROCESS

Every surface to be coated should be clean of dust and grease and completely dry. According to tests carried out during the ETA (European Technical Assessment) process, the product can be applied within a broad range of temperatures between –20°C and 90°C. However, from our experience, we recommend applying polyurea at above 5°C and when the relative humidity is below 75%.

The properties of **Urespray F-75** mean it will adhere to any surface. However, its adhesion and the need for **primers** should be tested before application. Apply **Urespray F-75** in a single layer. According to the ETA, the minimum thickness of the dry applied product should be 1,3 mm, although the recommended thickness is 2 mm. However, the application of a first very thin layer is recommended. This will help detect the presence of

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moisture in the substrate, in which case blisters and bubbles will appear. This should be followed by a second thin layer, using a criss-cross pattern, once the first layer is dry.

For roofs with sections that have deteriorated due to lifting of the waterproof layer, clean the deteriorated area by removing the entire waterproof layer. Then re-apply the product in the cleaned area, making sure to overlap the new layers by at least 3 cm with the non-deteriorated areas.

Syntox-FA primer is recommended for porous and non-porous substrates (metallic surfaces), and Syntpur PO-84 for porous substrates (industrial flooring, concrete and wood).

After Urespray F-75 has been applied, we recommend the use of Alisyn-FA, a UV-resistant, aliphatic acrylic enamel, to prevent colour degradation. If more than 24 hours have elapsed since the application of Urespray F-75, Syntox-FA epoxy primer must be used before applying Alisyn-FA.

Component A tends to separate over time. Therefore, stir until completely homogenised.

COMPONENTS

COMPONENT A: Urespray F-75
A polyol mixture that contains catalysts and flame-retardants

COMPONENT B: Isocianato F-75-N
Modified MDI (Methylene diphenyl diisocyanate)

COMPONENT CHARACTERISTICS

Characteristics	Units	Isocianato F-75-N	Urespray F-75
Specific weight 20°C	g/cm ³	1,20	1,12
Viscosity	cPs	200 - 400 (25°C)	600 - 900 (22°C)
Free NCO content	%	19,2 - 20,2	-

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SYSTEM SPECIFICATIONS

Measured in a test vessel at 22°C in the mixing ratio specified by the in-house standard (MAN-S01).
 A/B mixture ratio: 100/100 by weight

Specifications	Units	Urespray F-75
Gel time	s	3 - 5
Set-to-touch time	s	6 - 10
Free density	g/L	900 - 1100

CHARACTERISTICS

Characteristics of the membrane:

Characteristics	Standard	Units	Urespray F-75
Apparent Density	DIN 53420	Kg/m ³	1150
Tensile strength	UNE EN ISO 527	MPa	>10
Elongation		%	>180
Tear strength	ISO 34-1:2011	N/mm	>30
Shore hardness	UNE EN ISO 868	Sh A	83 (23°C)
			88 (5°C)
			see curing time chart*
Water vapour diffusion resistance (μ)	EN 1931		5700
Consumption		Kg/m ²	1,5
Adhesion (concrete)		KPa	>50
Slip resistance (R _d)	UNE-ENV 12633:2003		49

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*Curing time chart (result of test for 2-3 mm of thickness and 35-40% R.H.)

- Temperature 5°C:

Time	Shore A
15 min	50
30 min	78
45 min	80
1 h	85
2 h	87
5 h	88

- Temperature 23°C:

Time	Shore A
15 min	68
30 min	69
45 min	72
1 h	74
2 h	74
5 h	78
24 h	83

Classification according to ETA (16/0151)

Characteristics	Urespray F-75
Climatic zone	S (severe)
Surface temperature	from -20°C to 90°C
User load	on polyurethane: P3 (accessible for maintenance of plant and equipment and to pedestrian traffic) on other substrates: P4 (roof gardens, inverted and green roofs)
Slope of construction element	S1-S4 (<5% – >30%)
Working life of the system (EOTA)	W3 (25 years)

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This is the best information available, although not guaranteed, due to the complexity of the use of raw materials and equipment, which may alter the results.

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Other tests:

Properties	Result	Method
Reaction to fire	Class E	UNE-EN 13501-1
External fire performance	Classification B _{roof} (t1)	EN 13501-5
No migration of substances to drinking water (potable)*	SUITABLE	UNE-EN 12873-2/2005 RD-140/2003
Contact with foodstuffs (simulant D1-ethanol 50%)*	SUITABLE	EN 1186-1:2002
Polish hygiene certificate (HK/W/0624/01/2016)	SUITABLE	

*Result of valid test for Urespray F-75 pigmented in green.

STORAGE RECOMMENDATIONS

The A and B components are sensitive to moisture and must be stored in airtight containers or tanks. The storage temperature should be between 15°C and 25°C for the polyol and between 15°C and 30°C for the isocyanate.

Avoid lower temperatures that can cause crystallization in the isocyanate, as well as high temperatures that can cause alterations in the polyol.

With proper storage, the shelf lives are 4 months for Component A (polyol) and 6 months for Component B (isocyanate).

SAFETY RECOMMENDATIONS

There are no significant risks with the system if handled properly. Avoid contact with the eyes and skin. Preparation and handling must be in accordance with the product's safety data sheets.

AVAILABLE FORMATS

The materials are normally supplied in non-returnable, 25-, 50- and 220-litre metal drums (blue for component A and black for component B).