

Urespray S-004

DIVISION: PU SYSTEMS

DESCRIPTION

URESPRAY S-004 is a polyurethane elastomer, which is obtained by means of the reaction of two liquid components (polyol and isocyanate), at an ambient temperature. Blending may be made 'in situ' by conventional polyurethane foam spray equipment.

PERFORMANCES

It is an integral coating without joints nor bridges, specially designed to protect insulating plastic foams. It provides excellent adhesion onto polyurethane foam. Adherence should be tested, using primers for some difficult substrates. It achieves great resistance to water and chemical agents. Its quick drying allows application onto vertical surfaces. Its spray application allows coating of surfaces with difficult shapes with a resistant, waterproof and perfectly joint integral film.

DESCRIPTION OF THE COMPONENTS

COMPONENT A: mixture of polyols, containing catalysers, stabilisers and fire retardants.

COMPONENT B: modified MDI (biphenyl methane diisocyanate).

DENOMINATION OF THE COMPONENTS

COMPONENT A: **POLIOL S-004**

COMPONENT B: **ISOCYANATE H**

APPLICATIONS

The main applications of **URESPRAY S-004** are in the industrial and building fields, mostly for coating of materials for thermal insulation, such as polyurethane rigid foam. The product should be applied when insulation remains visible, for example: cold rooms, bird farms, tanks, etc., and surfaces subject to frequent cleaning, as well as when aesthetic appearance is required.

EQUIPMENT

The product is designed for application with standard spray equipment having component pressure from 50 to 200 kg., which generally allows dosing in a ratio of 1:1, components being heated at 40-50 °C before their introduction in the static mixer.

PROCESSING CONDITIONS

Surfaces to be sprayed should be clean, dry and free from dust and grease. Temperature should range from 10 and 40 °C, relative humidity being below 75%.

Adhesion between fresh-applied elastomer coats is highly resistant, even forming a unique film. Nevertheless, if the application is on an already cured coat, a primer should be applied to assure a good adherence.

If repairs Urespray already applied, you should cut the damaged area and fill it with the adhesive SK11. Once cured it, the area must be protected with a polyurethane coating resistant to UV.

URESPRAY S-004 is specially formulated for an excellent adherence on polyurethane rigid foam. In case of degradation of the insulation due to the passing of time, restore it before applying a new coat of polyurethane foam.

The correct operation consists of applying a very thin first layer; the second application (also thin) may be made as soon as the first one is dry, by using a criss-cross pattern. The first coat will help to detect moisture presence in the substrate, in which case blisters and bubbles will appear. This first coat will also provide insulation power, leading to the achievement of a good foaming operation in the following coats.

URESPRAY S-004 can be pigmented in several colours (green, white and red tile), by means of the addition 'in situ' of the corresponding **Urespray Paste** in component A (We recommend 4% by weight).

Component A tends to settle due to the passing of time. Therefore, be sure to stir it until full homogenisation, especially if some pigment has been added.

CHARACTERISTICS OF THE COMPONENTS

CHARACTERISTICS	UNIT	ISOCYANATE H	POLYOL S-004
Specific gravity 25°C	g/cm ³	1,23	1,12
Viscosity 25°C	cps	250	300
Flash point	°C	>200	>170
NCO index	%	31	-

TYPICAL SPECIFICATION ANALYSIS OF THE SYSTEM

Typical specification analysis in the laboratory, in the mix ratio mentioned hereunder as per own standard (MAN-S01), result in the following:

MIX RATIO A/B: **100/100** in weight

SPECIFICATION	UNIT	S-004
Gel time	sec	2 – 4
Tack free time	sec	10 – 14
Free density 290 cm ³ glass	g/l	900 – 1100

CHARACTERISTICS OF THE SYSTEM

CHARACTERISTIC	UNIT	S-004
Average density UNE 53215	kg/m ³	1000
Shore hardness DIN 53505	ShD	70-75
Fire resistance DIN 4102	Class	B2

STORAGE CONDITIONS

All Components are hygroscopic, and should be stored in drums or hermetic deposits. Storage temperature should be between +15°C and +25°C.

Lower temperatures that could cause crystallisation in the isocyanate should be avoided, as well as higher temperatures that may provoke alterations in the polyol.

With a correct storage, component A (polyol) has a pot life of 6 months, for component B (isocyanate) 9 months and also 9 months for component C (Paste).

SAFETY RECOMMENDATIONS

With the right handling, the system has not great risks. If there is eye and skin contact, wash well with lots of water. During the system production and handling, the Safety Data Sheets should be observed. A more extensive information of the subject can be found in the Safety Data Sheet of each product.

PRODUCT DELIVERY

The product is normally supplied in 50 It (50Kg Component A and 50Kg Component B) and 230 It (225Kg Component A and 250Kg Component B). Non-returnable metallic drums (blue for component A and black for component B). **Urespray Paste** is delivered in 5 and 10 kg. plastic bottles.