

2-K Polyurea spray coating, highly elastic, flame retardant, 1:1 (vol)

1 General Data

Fields of application

VIASEAL UREA 55/75 FL is used as a crack-bridging waterproofing and for the production of waterproof layers in various areas of construction. Examples of applications that are not directly subject to mechanical loads are subterranean waterproofing, underground parking garage decks in contact with the ground, green bridge root penetration protection, tunnel portals and water basins. In addition, the product can be used in combination with a wearing layer as a trafficable waterproofing.

Other possible applications are in the area of secondary containment (catch basins), e.g. for sewage systems, catch basin coatings or sewers and pipes.

The spray processing and the very fast curing allow the coating of components even in vertical areas and overhead.

Product description

VIASEAL UREA 55/75 FL is a highly elastic, solvent-free 2-component polyurea spray membrane with additional flame protection for increased fire protection requirements in direct use.

The high elasticity ensures that the coating system is crack-bridging and thus impermeable. The material cures almost shrinkage-free and can therefore be applied in layer thicknesses of several mm, depending on requirements. The product can only be processed by machine.

Aromatic polyurea products can yellow under UV light. We therefore recommend applying a color-stable sealer in areas exposed to UV light.

Technical support

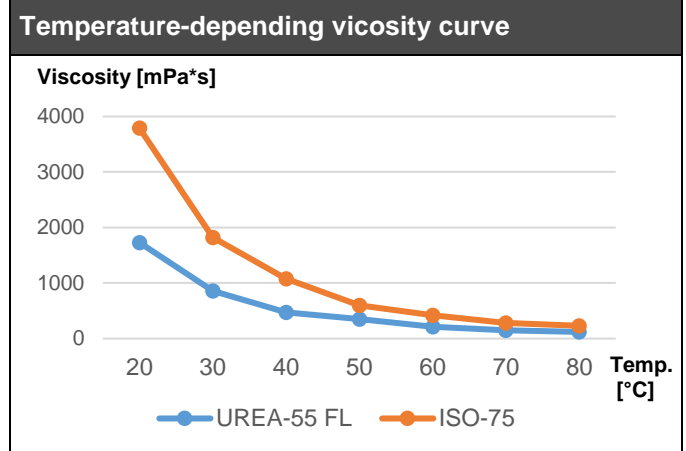
For system build up possibilities and detailed information relating to the laying of VIASEAL products, please contact VIACOR Polymer GmbH.

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(A) Technical Data		
Components	VIASOL UREA-55 FL	VIASOL ISO-75
1. Density (23°C)	1,05 g/cm ³	1,09 g/cm ³
2. Mixed density (23°C)	1,07 g/cm ³	
3. Viscosity (23°C) (see graph below)	Ca. 1500	Ca. 3300
4. Packaging size	205 kg Fass (blau)	213 kg Fass (rot)
5. Colour	grau	bernstein
6. Shelf life (20°C)	12 months in closed original container	
7. Storage	Dry at 10°C – 30°C, avoid direct sunlight	

(B) Technical Data		
VIASEAL UREA 55/75 FL		
1. Tensile strength (DIN EN 196/ASTM C109)	> 17 MPa	
2. Elongation at break (DIN 53504)	> 250 %	
3. Hardness development (Shore-D) (DIN EN ISO 868)	5 min	38
	45 min	45
	24 h	51
	48 h	52
	7 d	53



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2 Application Method

Please refer also to our general application guideline.

Substrate preparation

VIASEAL UREA 55/75 FL is only applied to prepared substrates.

The substrate must be sound, fine-grained and load-bearing, clean and free from loose particles and separating substances such as grease, oil, wax, dust and moisture.

VIASEAL UREA 55/75 FL can be applied on concrete, asphalt, iron, steel, wood, aluminum and old VIASOL waterproofing layers. Depending on the substrate, special pre-treatments and primers must be used (see VIASEAL primer matrix for waterproofing). In the edge zone, precautions must be taken for anchoring.

The working area should be protected from spray with foil or paper/cardboard before applying the spray sealant. In windy conditions, appropriate precautions should be taken to protect the surrounding area from spray.

Application

The amine component VIASOL UREA-55 FL and the isocyanate component VIASOL ISO-75 are delivered in separate drums. The component VIASOL UREA-55 FL should be homogeneously stirred with a bung-hole barrel stirrer or similar before processing. The material can then be taken directly from the delivery container by means of mixing and metering equipment.

VIASEAL UREA 55/75 FL is applied by spraying with special high-pressure machines with countercurrent injection mixers (e.g. GRACO Reactor H-XP2), which reach 160-200 bar at the spray head at a temperature of 65-80°C. The temperature should be selected according to the application conditions. The choice of temperature should be selected individually, depending on the desired spray pattern, and tested if necessary.

It is applied wet-on-wet in several layers up to the desired film thickness. The recommended minimum layer thickness is 2 mm.

VIASOL SO-X12 Tool Cleaner is used to clean tools and other contaminants. For cleaning the spraying equipment, follow the instructions of the equipment manufacturer.

(C) Technical Data

Liquid Mixture

1. Mixing ratio A:B (23°C)	1:1 by volume
2. Working time	Only with machine
3. Application temperature (substrate and air)	max. 50°C (min. 3K above dew point)
4. Processing temperature of material* (both components at spray gun)	ca. 65°C – 80°C
5. Spray pressure (Application with impingement mixer and spray machine, e.g. GRACO Reactor H-XP2)*	ca. 160-200 bar
6. Rel. Humidity	max. 90%
7. Material consumption (depending on substrate)	ca. 1100 g/m ² per mm thickness
8. Dry to touch (20°C)	after 30 s
9. Following layer (20°C)	within 2 h

* To ensure a homogeneous mixture of the two components, preliminary tests may have to be carried out with the respective equipment. The above values are guide values and may deviate from the actual processing parameters required. The quality of the coating is determined by the proper condition of the mixing equipment and the spray head. Therefore, the maintenance of the mixers must be carried out with utmost care.

Over coating

If the product is to be used up in several layers, this can be done within 2 hours without further pretreatment. In case of longer waiting times, one coat of VIASOL PU-P255 must be applied as a bonding bridge and the first coat of VIASEAL UREA 55/75 FL must be broadcasted, if necessary.

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3 Further Information

Decopaint-Guidelines (EU 2004/42/EG)

The maximum allowable VOC content for Product category IIA j Type Lb in the ready-to-use state is stage II (from 2010) < 500 g/l VOC.

In the ready-to-use state this product contains less than 500 g/l VOC.

Warnings and precautions

Information relating to the safe handling of this product can be found in the Material Safety Data Sheet. Local regulations concerning the safe handling of amine and isocyanate resin based coating materials must be observed.

Suitable protective clothing including suitable respiratory and eye protection must be worn.

Disclaimer

All information in this technical data sheet is based on our current knowledge and experience. This does not release the applicator from performing their own tests as many application factors, beyond our control, affect the application of our product. No guarantee of characteristics or suitability for a special purpose can be derived from this information. All present data, descriptions, drawings, photos, ratios, weights etc. are subject to change without prior notice and do not represent contracted characteristics of the product.

Due to different materials, sub-bases and working conditions, no guarantee of an application result or any liability claims can be derived from these details or from an unwritten technical advice except for liability claims based on:

- damage to life, body or health resulting from a negligent violation of obligations or a deliberate or negligent violation of obligation of a legal representative or assistant and
- if we are charged with intention or gross negligence.

The user has to test the products for their intended use. The user is responsible for following existing laws and orders and for observing third party trade mark rights.

As all VIACOR data sheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue (see www.viacor.de or contact us directly).