



Family
Syntech

Product Lines
• Aqua
• Building
• Infratech

Type
Polyurethane resins and related accessories

Functional Categories
• **Waterproofing with hot-sprayed elastomeric coatings (100% pure polyurea)**
• **Structural maintenance of dams, reservoirs, ducts and water ducts**
• **Structural maintenance of bridges and viaducts**
• **Protective, strengthening, polyurethane or epoxy coatings**

Components
Two-components

Appearance
Liquid + Liquid

SYN.0193

SYNTECH POLIUREA SPRAY

Ultra flexible waterproofing elastomeric (polyurea) membrane

Dosage

2.1 kg /m²

Packaging

- Can 60 kg [A]
- Can 20 kg [A]
- Barrel 225 kg [A]
- Can 60 kg [B]
- Can 20 kg [B]
- Barrel 225 kg [B]
- Kit: 1 Can 60 kg [A] + 1 Can 60 kg [B]
- Kit: 1 Can 20 kg [A] + 1 Can 20 kg [B]
- Kit: 1 Barrel 225 kg [A] + 1 Barrel 225 kg [B]

Application

- Two-components hot sprays

Certifications and legislations



EN 1504-2

Products and systems for the protection and repair of concrete structures - Surface protection systems for concrete

General description

Waterproofing elastomeric membrane in pure polyurea, two-component, ultra flexible, instant hardening. The base resin is obtained by polyaddition of an aromatic diisocyanate with a diamine. After hardening, the covering is highly performant in terms of watertightness, strength, flexibility, tensile strength, impact and abrasion resistance, chemical resistance, UV resistance, "crack-bridging" properties, anti-corrosion protection and overall hardness. Perfect for the manufacture of waterproofing coatings with high performance and durability.

General features

SYNTECH POLIUREA SPRAY should be applied in layers 2 mm thick by hot spraying (about 70°C) using special high pressure airless bi-mixer pumps. The particular polymer molecule which it is made of allows you to provide "in situ", an elastic membrane that catalyses in a few seconds and then instantly reaches its final waterproofing and strength performance.

The combination of speed of application, total moldability of the resulting coating, perfect watertightness and remarkable chemical resistance, as well as the very high flexibility of the system (400% elongation at break), confirms that SYNTECH POLYUREA SPRAY can be considered the perfect system for waterproofing many types of buildings, structures and hydraulic works even in the presence of complex morphologies and difficult operative conditions.

Other important advantages of the system include:

- Possibility to laying on a wide variety of media (concrete, metal, wood, tiles, plasters, etc.), seamlessly.
- Safe on-site application even on irregular surfaces, with steep slopes or vertical.
- Possibility of creating continuous layers, exempt from critical localisations constituted by the usual surmounts.
- Possibility of providing thin layers, with reduced unit weight, for high efficiency performance.
- Possibility of easier and efficient servicing and/or recovery.
- Effective waterproofing performance ensured even in severe operating conditions, in terms of mechanical stresses, chemical stresses, walkability, wheeled traffic, etc.
- Efficient capacity to ensure that the effective performance even in the presence of micro-fissurative conditions thanks to the high "crack bridging ability" (ability to resist the creation of new cracks in the support) and to support dynamic movement cycles of the cracks.

Fields of application

SYNTECH POLIUREA SPRAY is specifically formulated to create a flexible membrane for protective and waterproofing coatings of concrete and steel structures and building materials of any kind such as coatings for tanks and reservoirs, for the containment of water and wastewater, pipes, dams, industrial plants and manufacturing facilities, bridges, covers, walkways, terraces, floorings, parking areas, etc.

Available colours

- Traffic grey A



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Basic features



Highlighted product



Density:
1.05 kg/dm³



Max. recommended thickness:
2.5 mm



Mixing ratio:
1:1



Temperature of use:
-15 / +45 °C



Use wearing protective gloves



Adhesion to the substrate:
1.5 N/mm²



Flammable material



Min. recommended thickness:
2 mm



Shelf-life:
6 months



Use wearing protective glasses

Technical specifications

Breaking load longitudinal (NBN EN 12311-2): 20 N/mm²

Capillary absorption (EN 1062-3): <0.1 kg·h^{0.5}/m²

Complete hardening (a 20°C): 12 h

Dry residue (10' a 105°C): 100 %

Hard to touch (a 20°C): 6 - 20 s

Hardness (EN ISO 868 - Shore A/D): 92/45

Longitudinal elongation at break (NBN EN 12311-2): 345 %

Mixing ratio of the components A:B: 1:1

Resistance to abrasion: 0.03 %

Tools cleansing

- Thinner for resins

Applicable on

- Plasters
- Concrete
- Cement-based or lime-based mortars
- Prefabricated concrete
- Drywall
- Plaster (gypsum)
- Wood
- Metal surfaces
- Plastic
- Fiber-cement
- Tiles
- Floor screed
- Asphalt
- Rock walls
- Glass

Substrate preparation

The application surfaces should be solid, dry, and carefully prepared and reclaimed from the presence of fouling, powder, fat and water-repellent substances, non-adhering parts, etc.

In the case of steel, if the support is rusty, dirty or encrusted, it would be appropriate to sandblast it to remove surface impurities. On the other hand, in the case of other media such as concrete, tiles, stoneware, etc., it is possible to provide a vigorous cleaning treatment and removal of the surface layer affected by fouling and scaling (scarification, shot peening, smoothing, chemical cleaning, etc.).

In order to provide a correct adhesion, the preliminary application of the adhesion promoter SYNTECH POLYUREA PRIMER.

Instructions for use

SYNTECH POLIUREA SPRAY should be applied by hot spraying using special high pressure bi-mixer pumps, specific for two-component systems. It can be applied only using special tools and equipment, exclusively by highly qualified staff.

Storage and preservation

Protect from freezing. Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Inadequate storage of the product may result in a loss of rheological performance. Protect from humidity. Store the product at a temperature between +5°C and +35°C.



Warnings, Precautions and Ecology

Technical and performance data outlined in this document are the result of laboratory testing conducted in a conditioned environment, as such they can result as considerably changed from operating and application conditions. The need follows to carry out preliminary tests in actual use conditions.

The user is required to check the product's most recent Material Safety Data Sheet, reporting physical-chemical and toxicological data, risk phrases and other useful information on how to safely transport, use and dispose of the product and its packaging. It is also reminded that the product and its packaging must not be dispersed in the environment for any reason.

SYNTECH POLIUREA SPRAY is a product intended exclusively for professional use and it should be handled according to the instructions provided in the Safety Data Sheet, wearing protective gloves, goggles and clothing.

The recently applied product is grey in colour (RAL 7042). In the absence of further coating, the original colour may be subject to variation over time, even significant, due to UV rays (the technical performance remains however unaltered). In case of aesthetic appearance of the coating is important, it will be necessary to coat the polyurea membrane layer with SYNTECH POLYUREA TOP COATING.

We recommend applying SYNTECH POLYUREA SPRAY only on media with moisture which are ascertained not to be greater than 3 %. Avoid proceeding with the waterproofing operations in the event of if imminent rainfall forecast. Coatings with SYNTECH POLYUREA SPRAY, should be resumed by slight texturing of a portion of the waterproofing made the day before and after applying SYNTECH POLYUREA PRIMER on this area.

In the case need arises to coat and waterproof terraces, balconies, flat or sloping roofs, previously coated with sheaths or bituminous membranes, polyurethane foams and the like, we recommend using SYNTECH POLYUREA SPRAY SPUR.

SYNTECH POLIUREA SPRAY is produced/distributed by



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