

Syntech Bioflex

Anti-acid coating of modified epoxy and polysulphide polymers



Anti-acid coating based on modified epoxy and polysulphide polymers, for the waterproof coating of concrete and steel tanks, tanks and containment tanks.

CUSTOMS CODE:

COMPONENTS: Two-components

APPEARANCE: Thick liquid + Thick liquid

AVAILABLE COLORS: Pebble grey

PACKAGING AND DIMENSIONS: Can 6.1 kg [A] - Can 3.9 kg [B] - Kit: 1 Can 6.1 kg [A] + 1 Can 3.9 kg [B]

OBTAINED CERTIFICATIONS AND REGULATIONS



FEATURES AND BENEFITS

- High mechanical and abrasion resistance
- High adhesion to surfaces
- Good elasticity
- High chemical resistance to acids, bases and solvents
- Very high tenacity and ease of cleaning and maintenance
- Applicable to heavy thicknesses

FIELDS OF APPLICATION

- Anti-acid waterproofing protective coating for the chemical industry
- Internal and external lining of tanks, tanks, cisterns, towers, pylons, etc.
- Waterproof protective coating of digesters of biogas and purification plants
- Anti-acid protective coating for sewers, secondary tanks, sewer collectors, channels and ducts intended for the containment of waste water and drainage
- Anti-acid coating of fiberglass tanks for the chemical industry

ALLOWED SUPPORTS

Concrete - Prefabricated concrete - Wood - Floor screed - Steel - Bricks - Calcestruzzo armato - Porous stone



PREPARATION OF SUPPORTS

Concrete

The surfaces to be coated must be stable, clean and free of substances that can affect the adhesion of the coating. In case of restoration, first use mortars and products from the FLOOR line or the REPAR line suitable for the purpose. Wait for the drying times before applying the next coating. The tensile strength of the support must not be less than 1.5 N/mm². Any existing paintwork, coatings or paints, residues of cement laitance, release agents, greases, silicones, etc. they can be removed mechanically by sanding with a single-brush sander, sandblasting, hydro-sandblasting or chemical removal, treating the support with Deterg A (diluted in water 1:10) left to act until the reaction is complete, then rinsing thoroughly with water. Wait until the floor is dry before proceeding with the application of Syntech Bioflex.

Cracks and fissures

In the case of static cracks, for sealing use the Grout Cable structural grout or mortars from the FLOOR line, or epoxy products such as Syntech Primer EP-W or Syntech AS 21. The sealing of dynamic cracks or cracks larger than > 4-5 mm must be evaluated on site. They can generally be grouted using elastomeric materials or worked as movement joints.

Localized grouting and restoration

Any holes, deficiencies, repairs of portions of concrete can be carried out by applying our mortars from the FLOOR line or the REPAR line. Any small filling of holes and gaps can be carried out by applying Syntech AS 21 epoxy mortar.

Resin coatings

The surfaces to be coated must be stable, clean and free of substances that can affect the adhesion of the coating such as dirt, grease, oil, etc. Sand the surface by mechanical sanding with diamond discs and dust extraction.

Steel

Any welding residues must be removed and the joints sanded. Sandblast to cleanliness level Sa 2½ according to EN ISO 12944-4. The surfaces to be coated must be free from dirt, oil, grease and impurities. Surface roughness degrees RZ ≥ 50

Primer on concrete and fiberglass

On the adequately prepared support, apply a coat of Syntech Bioflex diluted with Syntech Diluente Sintetico at a maximum rate of 20-25% by weight as a bonding primer, using a brush or medium-haired roller, taking care to saturate the entire surface to be treated. Wait 12 hours before applying the protective anti-waterproofing coating.

MODE OF USE

Support humidity control

Before installing resin systems and coatings, always check the residual humidity content of the support. Check for the presence of residual humidity using the plastic sheet method according to the ASTM D 4263 standard: fix a heavy polyethylene sheet with a size of at least 45x45 cm to the support with adhesive tape. 24 hours after its installation, lift the sheet and check for signs of humidity.

If testing with a carbide hygrometer, the moisture content of the substrate must be < 4% by weight.

In case of residual humidity, apply two or more layers of Syntech Pavidamp three-component epoxy primer.

Application temperature (air and support) Minimum +10°C _ Maximum + 35°C. The support must have a temperature at least +3°C higher than the dew point to reduce the risk of condensation or bleaching of the finish. Ambient relative humidity Minimum 35% _ Maximum 80%.

Mixing

Thoroughly homogenize the individual components inside their container for a couple of minutes by manual or mechanized stirring, taking care to use a clean tool free of potentially polluting substances. Combine the two components in the indicated mixing ratio. Add component B (hardener) to component A (base) and mix thoroughly until the product is completely homogenized. It is advisable to start mixing briefly with an electric drill at low speed and then intensify the stirring up to a maximum of 300-400 rpm. Avoid mixing times that are too long in order to limit the quantity of air incorporated into the product.

Application

The product can be applied by spray, trowel or roller. On the adequately prepared support, apply the product in two or more coats, respecting the indicated consumption and recoating times. It is advisable to prepare a quantity of product no greater than that which can be applied during the useful life of the material. High temperatures accelerate hardening and reduce the use time of the prepared material.

APPLICATION METHODS

Paint roller - Spatula - Sprayer

TOOL CLEANING

Syntech Diluente Sintetico



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KEY FEATURES

-  Shelf-life: 12 months
-  To be applied in two coats
-  Use wearing protective gloves
-  Temperature of use: +10 / +35 °C
-  Use wearing protective glasses

TECHNICAL SPECIFICATIONS

EN 1542

Adhesion by direct traction $\geq 3.0 \text{ N/mm}^2$

Shore A ASTM D2240

Hardness **55 - 60**

EN 1062-6

Permeability to CO₂ **Sd > 1000 m**

EN ISO 5470-1

Taber abrasion resistance expressed as weight loss in grams (H22 wheel - 1000 g - 1000 rpm) **< 100 mg**

Touch hardening at 20°C **10 - 12 h**

EN 1062-3

Capillary absorption **0.04**

EN 12188

Adhesion by direct traction on steel $\geq 14 \text{ N/mm}^2$

EN ISO 7783-1

Permeability to water vapor **Sd = 7.3 m**

EN 13529

Resistance to severe chemical attacks **See Table**

EN ISO 6272-1

Impact resistance **> 4 N/m**

Complete hardening at 20°C **7 day**

< 500 g/l

CONSUMPTION

From 0.40 to 0.50 kg of Syntech Bioflex for each square meter of surface to be covered, applied in two coats.

STORAGE AND CONSERVATION

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.



ADDITIONAL CONTENT

Workability time

10°C	20°C	30°C
120'	60'	30'

Waiting time on your hands

	10°C	20°C	30°C
Minimum	24h	12h	10h
Maximum	48h	48h	48h

Commissioning

Temperature	Walkability	Light Traffic	Heavy Traffic
15°C	48 h	72 h	72 h
20°C	36 h	48 h	72 h
30°C	24 h	36 h	72 h

The times shown in the Workability Times, Waiting Times and Commissioning Times are intended to be approximate and may vary depending on the conditions of the support and the installation environment.



WARNINGS AND PRECAUTIONS

Cleaning of tools: Clean all tools and equipment with Syntech Synthetic Thinner immediately after use. Hardened material can only be removed by mechanical removal.

- Do not apply on inadequately prepared supports.
- Do not apply on dusty, weak, unstable and poorly cohesive supports.
- Do not apply on damp supports or surfaces subject to capillary rising humidity.
- Protect the product from water and atmospheric agents for the first 24 hours after its application.
- Respect the consumption and over-application times indicated.
- Make sure the primer coat is fully cured before applying the finish.
- Applications at different thicknesses could generate different degrees of finish.
- Use the entire quantity of components to avoid mixing ratios.
- Keep the mixed product away from heat sources.
- If using space heaters, use only electric ones. The use of hydrocarbon burners releases water vapor into the environment which could compromise the degree of finish of the product.
- In the case of overcoating in subsequent coats, observe the maximum overcoating time. Beyond the indicated time it will be necessary to mechanically sand the surface before applying the next layer.
- Do not dilute the product with water.
- The use of unsuitable thinners different from those indicated can create problems for the product, both of an aesthetic nature (color change, sedimentation of the product, variation in the degree of gloss, formation of surface hazes, etc.) and in terms of performance techniques. The use of unsuitable thinners can also create problems during the application phase. Azichem srl therefore does not guarantee any performance of the product.

The general information, along with any instructions and recommendations for use of this product, including in this data sheet and eventually provided verbally or in writing, correspond to the present state of our scientific and practical knowledge. Any technical and performance data reported is the result of laboratory tests conducted in a controlled environment and thus may be subject to modification in relation to the actual conditions of implementation.

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