

StrataShield Flex Thix

Single component, semi-thixotropic liquid PU waterproofing membrane

Product overview

StrataShield Flex Thix is a single component, semi-thixotropic polyurethane waterproofing coating. It is cold applied and cures to provide totally adhered, elastomeric finish. The product offers exceptional water tightness and withstands building movements.

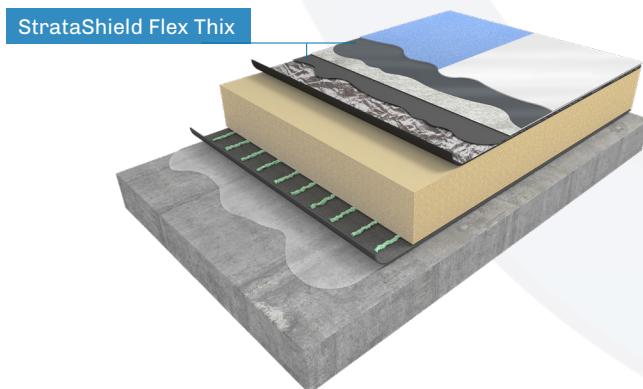
StrataShield Flex Thix has fast-curing properties, enabling the job to be completed quickly and easily. It has also been fully fire tested in accordance with EN 13501-5 and DD CEN/TS 1187:2012, Broof Test 4.

Typical use

StrataShield Flex Thix is ideal for use on a wide range of waterproofing applications, including roofs, balconies and terraces.

Features & benefits

- Cold-applied, flame free waterproofing solution
- Elastic and seamless coating
- Weather resistant & excellent bonding
- BBA Certified system - Certificate No: TBC
- Tested as part of a system to achieve Broof Test 4 fire classification as certified by Warringtonfire
- Suitable for a wide range of applications
- Reinforcement not normally required except at critical points



Substrate requirements

In order to achieve a good penetration and bonding, the substrate must be clean and dry, free of dust, loose particles, oils, organic residues or laitance. It must also be flat and levelled, and any cracks or fissures must be repaired prior to application. A pull-off load test must also be performed showing a minimum resistance of 1.4 N/mm².

Recommended environmental conditions

For all applications both the air and substrate temperatures should be between 0°C and 30°C. At higher surface temperatures, specific precautionary measures must be taken - please consult Strata Technical Services for more advice. Please note that high air temperatures and excessive moisture conditions can reduce the pot life of the product and lead to bubble formation under the membrane surface, causing a deficient appearance.

Technical characteristics: pre-application

Properties	Unit / Description
Chemical description	Solvent borne single-component aromatic polyurethane
Physical state	Liquid-paste
Packaging	Metal cans: 5 / 10 / 25 kg
Non-volatile content	85%
Flash point (ASTM D 93)	45°C
Colour	-
Density (20°C)	1.3 g/cm ³
Viscosity (20°C, 100 Rpm)	10,000 mPa.s
Viscosity (35°C, 100 Rpm)	1,500 mPa.s
VOC content (g/L i %)	184 g/l
VOC class as per 2004/42/EC	Product subclass: i II Solvent based single-component performance products Limit from 01/01/2010: 500 g/l
Pot life (1 kg, 20°C, 50% hr)	4-6 hours
Storage	Keep at a temperature below 30°C, away from ignition sources and moisture
Use before	Can be used up to 12 months after manufacture in its sealed original container (NB: 9 months if white or black pigmented).

Technical characteristics: final product

Properties	Unit / Description	
Final state	Solid elastomeric membrane	
Colour	Depending on the chosen pigmentation	
Shore hardness (ISO 868)	65-70A	
Density of film	1.3 g/cm ³	
Elongation / Tensile stress (EN-ISO 527-3)	100%	2.0 MPa
	200%	2.8 MPa
	300%	3.0 MPa
	400%	3.4 MPa
Max elongation	617%	
Max tensile stress	4.1 MPa	
Adhesion (concrete)	2.0 MPa	
Adhesion (ceramics)	2.6 MPa	
Adhesion (polyurethane foam)	1.4 MPa	
UV resistance	Products includes anti UV additives. A colour change is expected due to its aromatic polyurethane composition. This discolouration does not affect its properties.	
Water vapour permeability (EN 1931, $\mu > 1000$)	20 g/m ² day	
Tear strength (ISO 34-1, Method B)	14 N/mm	
Abrasion (Taber, 1000 cycles, CS-10, UNE 48250)	14.3 mg	
Thermal resistance	Stable up to 120°C	
Fire resistance External fire exposure test (according to BS 476:Part 3, 2004): Category EXT.F.AC	B roof= t4	

Chemical resistance

Chemical	Result (0=worst, 5=best)
Water (24h, 25°C)	5
Salt water (24h, 90°C)	5
Hydrochloric acid solutions	
(200g/l, 24h, 25°C)	4
(200g/l, 24h, 80°C)	4
(3g/l, 24h, 25°C)	5
(3g/l, 24h, 80°C)	4
Sodium hydroxide (40g/l, 24h, 25°C)	5
3% Ammonia (24h, 25°C)	5
Acetone (24h, 25°C)	1
Ethyl acetate (24h, 25°C)	3
Xylene (24h, 25°C)	5
Motor oil (24h, 25°C)	5
Brake fluid (24h, 25°C)	2

Application guidelines

Stir and homogenise the product before use. Some of the contents may settle during storage and must be redispersed. Allow several minutes for any air bubbles to be released. Stirring should be done at low speed, avoiding mechanical means to prevent bubbles. If needed, the product may be thinned with up to 10% solvent, as a viscosity adjustment. Please consult Strata Technical Services for guidance on the correct solvent to use and never use universal or unknown solvents (e.g. white spirit or alcohols).

Apply by roller, brush, spreader or airless equipment. The product is applied in 2 coats (base coat and top coat) with each coat applied at a coverage rate of 1.5 - 2.0 kg/m². It is strongly recommended that all of the container contents is used during application as non-used product, even kept in a closed container, may develop a thick cured skin on the surface.

Curing time

Curing time is dependent on the environmental conditions. The curing rate increases as temperature and humidity rises. The following table gives a rough estimation of the curing time under diverse conditions for a 1 mm coat of product.

Environmental conditions	Dry to touch
7°C, 50% RH	4 hours
27°C, 60% RH	1 hours

Return to service

At usual conditions (25°C, 50% humidity) the membrane achieves up to 90% of its final properties in 3 to 4 days. Final hardness is not achieved until 10 or 15 days and it is preferable to wait this time before permanent contact with water is allowed. Re-application is possible as soon as the curing state of the first coat allows walking and working on it, and any re-application should be carried out within 48 hours.

Tool cleaning

StrataShield Flex Thix can be cleaned with any solvent approved by the manufacturer, along with acetone and alcohols. Once hardened, the product cannot be dissolved. It is recommended that equipment is cleaned as soon as possible as once the product has hardened it cannot be dissolved.

Health and safety

StrataShield Flex Thix contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, suitable ventilation must be ensured during application and all ignition sources must be avoided. This product is intended for professional use only and should only be used in the way described on this datasheet.

Environmental considerations

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorised waste manager. If there is some residual product in the containers, do not mix it with other substances without checking for possible dangerous reactions.

Trouble shooting

Problem	Observation / Solution
Product is not curing as expected	Has a suitable solvent been used? Some solvents are not suitable Apply a second coat using a recommended solvent as a dilutant
	Has the product been diluted too much? Too much solvent can slow the curing rate. Use a less diluted product
	Is the temperature suitable for application? At low temperatures curing can take longer. Below 15°C the use of accelerators is recommended
High viscosity	This is normal and can rise during shelf life. Can be adjusted using an approved solvent.

Further information

The information contained in this datasheet, along with any advice provided (either written or verbal) through testing are based on our experience and do not constitute any product guarantee for the installer.

We recommend that all of the information provided is carefully studied before proceeding with application, and strongly advise that suitable tests are carried out onsite before application in order to determine the suitability and compatibility for the specific project.

The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. As a result, the installer will be solely responsible for any damage derived from the partial or complete disregard of our guidance or the general mis-use of any of our materials.