

EPAPROOF FPCS 29

Polyurea system 100% non-volatile organic compounds

DESCRIPTION

Pure polyurea elastomeric system.

The resin component of the system is totally free of polyurethanes and has a content of amines equal to 100%.

EPAPROOF FPCS 29 is a two-component system, based on aromatic isocyanates and special flexible amines for the protection of metal and concrete surfaces, wood and EPS. The product is 100% solid and extremely elastic. The system further has a temperature resistance ranging from -30 ° C to + 140 ° C. It is a pure polyurea system consists of two components, isocyanates and amines, mixed together and sprayed using special equipment.

COLOURS

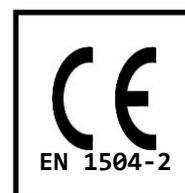
- RAL

ADVANTAGES

- friend of the environment - does not contain VOC
- no weight losses
- no secondary reaction products
- highly resistant to atmospheric agents
- excellent resistance to impact, abrasion and puncture
- low permeability values
- application at temperatures between -15 ° C and + 70 ° C and constant performance at temperatures between -30 ° C and + 140 ° C
- excellent properties of bridging
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FIELDS OF APPLICATION

- water containment
- roof coating
- flooring and garages
- bridges, stadiums, airports and railways
- industrial maintenance and production plants
- Sound deadening
- furniture
- protection and wood finish
- dwellings, wooden structures outdoor and indoor
- wooden work boats
- protection and external insulation
- thematic and decorative designs parks
- water parks and playgrounds
- scenography
- structural reinforcement
- soft foam



CE MARKING

The products belonging to EPAPROOF FPCS family are CE marked according to the product standard EN 1504-2: 2004 - Products and systems for the protection and repair of concrete structures.

The product is CE marked in accordance with attestation system 4 with reference to the use of physical resistance.

TECHNICAL DATA

PROPERTIES	VALUE	UNIT	STANDARD
Specific weight ISO at 25°C (B)	1,115 - 1,125	g/cm ³	UNI EN ISO 2811-1:2011
Specific weight RESIN at 25°C (A)	1,00 - 1,05	g/cm ³	UNI EN ISO 2811-1:2011
Viscosity ISO at 25°C (B)	1300 - 1500	mPas	UNI EN ISO 3219:1996 Brookfield
Viscosity RESINA at 25°C (A)	400 - 600	mPas	UNI EN ISO 3219:1996 Brookfield
Mixing ratio (A+B)	1:1	in volume	EPALAB006.01
Gel time at 25°C	35 - 45	sec	EPALAB007.01

PERFORMANCE DATA

PROPERTIES	VALUE	UNIT	STANDARDS
Tensile strength	4 - 6	Mpa	ISO 527-1:2012
Elongation at break	550 - 600	%	ISO 527-1:2012
Young Module	< 8	MPa	ISO 527-1:2012
Abrasion resistance - Taber Test:H22, 1000 g, 1000 giri	< 100	mg	EN 5470-1:2001
Abrasion resistance - Taber Test:CS17, 1000 g, 1000 giri	< 40	mg	EN 5470-1:2001
Hardness	45 - 55	Shore A	UNI EN ISO 868:2005
Capillary absorption and water permeability	< 0.1	kg/m ² *h ^{0.5}	EN 1062:2008
Foot traffic	240min/120min/60 min	min	a 5°C/ a 23°C/a 30°C
Complete hardening	48h/36h/24h	h	a 5°C/ a 23°C/a 30°C



The data refer to the product conditioned at room temperature of 23 ° C with a RH% of 30-50% for 28 days.



PRODUCT PREPARATION

It is necessary that the high-pressure equipment is always in perfect condition, clean and efficient. Make sure that the return pumps are clean and efficient. Make a product recirculation before starting to spray. In any case, carefully follow the manufacturer's instructions. It highlights that the isocyanate component of the system is particularly sensitive and reactive in humid environments. It is therefore advisable to use salt filters or any other suitable tool to introduce anhydrous air in the packaging. In the case in which the isocyanate drums are not completely used, it is suggested to check the cleanliness and the clarity before reuse. Also consult the guidelines given in the CODE OF GOOD PRACTICE for the correct application of polyurea prepared by Italy of the PDA Europe Committee:

http://www.epaflex.it/manuale/Manuale_di_Pratica_per_applicazione_Poliurea.pdf



Warning: before using the Resin component must be properly mixed to obtain a homogeneous product.

APPLICATION

The outline criteria on the entity of a surface preparation depends on several factors that can be essentially summarized in:

- kind of surface;
- surface condition;
- coating cycle;
- overall stresses.

The surfaces usually needing to be coated can be limited to the following cases:

- concrete or cement surfaces;
- plastering;
- stoneware, Klinker, brick tile;
- stone;
- metal.

In all types of substrate moisture content must never be higher than 4%. The substrate and polymerized membrane must be at least 3 ° C above the dew point to reduce the risk of condensation or blooming of the membrane finish.

It is possible to identify different types of preparation:

Smoothing

It is intended as the mechanical action by abrasive wheels, or abrasive paper (smoothing over) to remove cement milk, dirt and so on from the surface outer layer.

Bush-hammering

It is intended as the mechanical action by a suitable scotching machine, whether rotating or not, which removes 3/5 mm of surface layer.

Such tool only removes weak-mechanical-resistance material.

Milling

It is intended as the mechanical action by a rotating fraise to achieve a uniform and total constant- thickness removal, regardless of the surface resistance.



Sandblast

It is intended as the mechanical action by mineral or metal grains suitable to remove brittle and loose parts, previous coatings, besides realizing a higher nominal adhesion surface.

Shot-peening

It is intended as the mechanical action by metal grains gave off by suitable machines featuring a total recycle, parting and retrieval of sanding materials and fragments, in absence of powders.

Hydrowash

It is intended as the hydraulic action by an high- pressure water jet, in case at an high temperature, for a deep surface cleansing.

Hydro-sandblast

It is intended as the mechanical action by an high- pressure water jet together with the sand abrasive action to remove brittle and loose parts, previous coatings, and for a deep surface cleansing.

Following the correct preparation it is suggested that the substrate be primed. In these case it is recommended an Epaflex product

PRIMER	SUPPORTS
EPAPOX 22	cement surfaces
EPAPOX 25	Metallic and marble surfaces, wood and cement surface consolidation
EPAPOX BUS	moist surfaces
EPACRETE OLV 13.30	Polyurea or Polyurethane overlapping
EPACRETE OLV 201	cement and marble surfaces

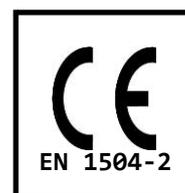
	(*) Any contamination (water, dirt, dust, ...) that will have to be thoroughly removed before recoating.
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For a detailed and precise description of the treatment to be applied to the area of application and accurate information on application methods of the product please refer to the guidelines outlined in the CODE OF GOOD PRACTICE for the correct application of polyurea prepared by Italy of the PDA Europe Committee:

http://www.epaflex.it/manuale/Manuale_di_Pratica_per_applicazione_Poliurea.pdf

Before placing on EPAPROOF FPCS 29 a second layer of EPAPROOF FPCS 29 it is recommended to observe the following intervals:

Substrate temperature (°C)	Minimum temperature (sec)	Maximum temperature (hours)
10	10 - 15	7
23	10 - 15	6
30	10 - 15	5



If after having applied the first layer of EPAPROOF FPCS 29 to 23 ° C is exceeded the time limit of 6 hours before the second application of EPAPROOF FPCS 29 is necessary to previously apply a layer of primer EPACRETE OLV 13:30.

CYCLES PREPARATION

Depending on the type of substrate, the type of the treatment and to the result to be obtained can be applied to different types of operating cycles to which reference is made to the link:

<http://www.epaflex.it/manuale/Manuale di Pratica per applicazione Poliurea.pdf>

PROCESS PARAMETERS

PARAMETERS	RANGE
Ambient temperature	+ 5°C min - +40°C max
Surface humidity	max 4%
Temp. Components (A e B)	from + 60 °C to + 80° C
Temp. pipes (A e B)	+ 60 °C // 80° C
Components pressure	Follow the instructions of the machined parts suppliers



Be aware that the system is not applied in the presence of water or high humidity.

Where the membrane is intended to exposure to UV rays and to atmospheric agents it is necessary to protect it with a suitable coating.

In this case we recommend the use of products of the series EPAPROOF FGPS or EPAPROOF FPUSPA be applied within 24 hours.

PACKAGING

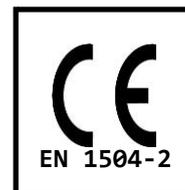
The EPAPROOF FPCS systems are typically supplied in two components:

EPAPROOF FPCR RESIN in drums of 205 kg or drums of 50 kg;

EPAPROOF FPCI ISO in drums of 225 kg or drums of 55 kg.

STORAGE

The two components of the system should be stored in a cool place away from direct sunlight, perfectly sealed in its original packaging and at a temperature between + 5 ° C and +25 ° C. The shelf life of the resin component is 12 months, while that of the isocyanate component is 6 months from date of manufacture when stored in original packaging, unopened, undamaged and sealed.

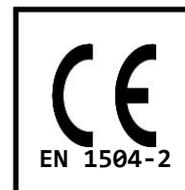


SAFETY

Avoid contact with skin and mucous membranes. Use protective gear, especially, goggles and gloves. Do not inhale any vapors from processing of the product and if it is possible, ventilate the work areas. For more information follow the MSDS recommendations.

The data contained in this document as well as advice or other support services are based on our current knowledge and experience. In view of many factors that may affect processing and application of our products, this data does not relieve processors from carrying out their own investigations and tests, particularly with regards to the suitability of the goods supplied for the processes and purposes they intend to use them for; neither does this data imply and guarantee of certain properties, or the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, measured values, etc given herein may change without prior notice and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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DECLARATION OF PERFORMANCE N°59

1.Unique identification code of the product - type:

EPAPROOF FPCS 29

2. Intended use:Products and systems to protect the surface of the concrete - coating: physical resistance

3.Manufacturer:

Epaflex Polyurethanes SpA
Via Circonvallazione est, 8
27023 Cassolnovo (PV)
Tel. 0039 0381 929521
Fax. 0039 0381 929523
e-mail: epaflex@epaflex.it

5.VVCP system:

system 4

6.6a. Harmonized standard:

EN 1504-2:2004

7.Declared performance:

Properties	Value	Unit	Standard
Abrasion resistance Taber test – peso:1000 g/H 22	<3000	mg	EN ISO 5470-1
Capillary absorption and permeabilità water	<0,1	Kg/m2 h0,5	EN 1062-3
impact strength	class I	class	EN ISO 6272-1
Test of adherence to Direct Pull	Flexible system: without traffic≥0,8	N/mm2	EN 1542
Test of adherence to Direct Pull	Flexible system: with traffic≥1,5	N/mm2	EN 1542
Fire Reaction	NPD	euroclass	EN 13501-1
Hazardous substances	see MSDS		

The performance of the above mentioned product conforms to all the performances, this declaration of responsibility is given, in accordance with Regulation (EU) No. 305/2011, under the sole responsibility of the aforementioned manufacturer.

This document is prepared in accordance with the Delegate Commission Regulation (EU) No: 574/2014 of February 21, 2014.
Signed on behalf of the manufacturer:

Davide Brambillasca

Cassolnovo, 30 november 2016