



Highly resistant cementitious polyurethane

DESCRIPTION

Raycrete SL is a cementitious polyurethane system for applications where aggressive media and thermal shock resistance is needed. It comprises a three component pre dosed kit comprising two liquids and a mineral filler. Different colours available.

PROPERTIES

- Resistant to organic acids and detergent products
- One single coat
- Thermal shock resistant.
- Durable

APPLICATIONS

Suitable for floors where resistance to frequent hot spray cleaning and aggressive detergent cleaning is necessary

- Food industry
- Food processing. Kitchens
- Chemical industry
- Other heavy duty industrial facilities

All these applications need a compromise between surface roughness and ease of cleaning. Smoother floorings may accept a more frequent cleaning, while rougher surfaces may need a more aggressive one.

CERTIFICATIONS

Instituto Giordano. Food contact:

- UNI EN ISO 4628-4:2007 from 11/01/2007
- UNI EN ISO 4628-2:2007 from 11/01/2007
- UNI 10792:1999 from 31/12/1999
- UNI 11021:2002 from 01/12/2002

Applus. Self-leveling floor pastes, UNE-EN 13813:2014

- Resistance to compression and flexotraction, UNE-EN 13892-2:2003
- Determination of bending properties, UNE-EN ISO 178:2003
- Determination of liquid water permeability, UNE-EN 1062-3:2008
- Determination of thermal expansion, UNE-EN 1770:1999
- Determination of water vapor permeability, UNE-EN 12086:2013

Aitex. Reaction to fire report 2016AN1481 as per EN 13501-1:2007.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B	Component C
Chemical description	Waterbased polyol dispersion + pigment (Comp.D)	Aromatic poliisocyanate	Cement composition
Physical state	Liquid	Liquid	Liquid
Packaging	Plastic container 3.1 kg + (Comp.D = 0.3 kg)	Metal container 3.5 kg	Plastic container / sack 12.6 kg
Solid content	75%	100%	100%
Flash point	>120°C	>120°C	n.a
Colour	Pigmented (green, red, grey, yellow...)	Brown	Off white
Density	0.97 g/cm ³	1.20 g/cm ³	1.55 g/cm ³ (bulk)
Viscosity	250 mPa.s (25°C)	90 mPa.s (25°C)	n.a

VOC content	<7 g/L	0	0
Mixing ratio	A=27, B=28 C=100 by weight A=43, B=36 C=200 by volume		
Mixture density	1.75 g/cm ³		
Pot life	20 minutes (23°C)		
Storage	Keep between 10° and 30°C. Frost sensitive.		
Use before	12 months after manufacturing date.		

INFORMATION ON THE FINAL PRODUCT

Final state	Hard, rigid slab
Colour	Pigmented
Hardness (Shore)	82D
Adhesion strength	Concrete: >10 MPa
Use temperature	4 mm: -15°C to +70°C 6 mm: -25°C to +80°C 9 mm: -40°C to +120°C
UV resistance	Aromatic isocyanate-based product. Yellowing under sunlight when applied outdoors is to be expected. This does not impair mechanical properties.
Reaction to fire	Bfl-s1 (EN13501-2007)

CHEMICAL RESISTANCE

Chemical	Concentration	Temperature	Result
Water	-	20°C	5
Ammonia	3 %	20°C	5
Methoxypropylacetate	-	20°C	5
Xylene	-	20°C	5
Hydrochloric acid	-	20°C	5
Ethyl alcohol	-	20°C	5
Acetic acid	Concentrated	20°C	3
Acetic acid	50 %	20°C	4
Acetic acid	10 %	20°C	5
Tetrahydrofuran	-	20°C	5
Hydrogen peroxide	-	20°C	5
Bleach	-	20°C	5
Gasoil	-	20°C	5
Sodium hydroxide	40 %	20°C	5
Phosphoric acid	-	20°C	5
Sulphuric acid	98 %	20°C	4
Phosphoric acid	85 %	20°C	5
Isopropyl alcohol	-	20°C	5
Citric acid	60 %	20°C	5
Benzoyl chloride	-	20°C	5
Nitric acid	5 %	20°C	4
Nitric acid	30 %	20°C	4
Nitric acid	60 %	20°C	3.5
Engine oil	-	20°C	5
Salfuman	-	20°C	5
Acetone	-	20°C	3
Skydrol	-	20°C	5
Coffee	-	20°C	4
Lemon	-	20°C	5
Coca-Cola	-	20°C	5
Beer	-	20°C	5



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SUPPORT REQUIREMENTS

Concrete surfaces must be previously prepared by scarifying or any other suitable means to obtain a rugged and clean surface.

Cut regularly spaced joints along the concrete slab depending on the total surface to be covered, and along all the edges.

AMBIENTAL CONDITIONS

Optimal temperature range for application is 15°C to 30°C. At lower temperatures, leveling may be impaired. Support temperature must be at least 3°C above dew point. Relative humidity should be less than 80%.

These temperatures must be constant throughout drying process. Application should be done with plenty of air/ventilation.

SUPPORT PREPARATION

Support preparation: Concrete supports must be prepared mechanically using the blasting technique to lift the surface and achieve an open pore and a rough surface, with irregularities ranging from 1 to 2 mm.

They must open together in the concrete to regular spaces, depending on the surface to be covered, and, in addition, along the end of the application area.

Remove all dust and loose material from the surface with a brush or broom.

MIXING

Mix the components in a bucket of enough capacity and stir gently.

Dosification is as follows:

- Component A: 1 unit (3.4 kg)
- Component B: 1 unit (3.5 kg)
- Component C: 1 unit (12.6 kg)

Mix should be quick, continuous and avoiding air entrapment. It is not recommended to use electrical, open-air stirrers. Best equipment is a low-speed mixing machine equipped with a closed lid.

APPLICATION

Use a suitable spreader. Use of spike roller is advisable for proper deaeration if the mixture is still fluid enough.

Recommended amounts to achieve desired thickness (approximate) are:

Dry thickness mm	Consumption kg/m ²
4	7
5	9
6	10.5
7	12.25
8	14

Recommended applications: in general, between 4 and 9 mm, for applications resistant to thermal shocks, apply a minimum thickness of 6 mm.

CURING TIME

For a 4 kg/m² application

Conditions	Dry to touch (h)
25°C, 60% rh	20

REAPPLICATION

Usually, the needed thickness can be achieved in a single coat.

RETURN TO SERVICE

Depending on the ambient conditions, light traffic is allowed after 24 hours. Total hardness and full use (e.g heavy vehicles) are reached after 6 days.

TOOL CLEANING

Use water, before curing.

SAFETY

Component B contains isocyanates. Always follow instructions provided in the Material Safety Data Sheet. As a rule, suitable skin and eye protection must be worn. This product is intended to be used only for the uses and in the way here described. This product is to be used only by industrial or professional users. It is not suitable for DIY-type uses.

ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled with the same precautions as if they were full. Treat empty containers as hazardous waste and transfer them to an authorized waste manager. If the containers still have some material left, do not mix with other product before considering the risk of potentially dangerous reactions. Never mix in volumes larger than 5 litres to prevent a dangerous heat evolution.

OTHER INFORMATION

The information contained in this DATA SHEET, as well as our advice, both written as verbal or provided through testing, are based on our experience, and they do not constitute any product guarantee for the installer, who must consider them as simple information.

We recommend studying deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests "on-site" to determine their convenience for a specific project.

Our recommendations do not exempt of the obligation of installers to deeply study the right application method for these systems before use, as well as to conduct as many preliminary tests as possible should any doubt arise. The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. In consequence, the installer will be the only responsible of any damage derived from the partial or total in-observation of our indications, and in general, of the inappropriate use or application of these materials.

This data sheet supersedes previous versions.

