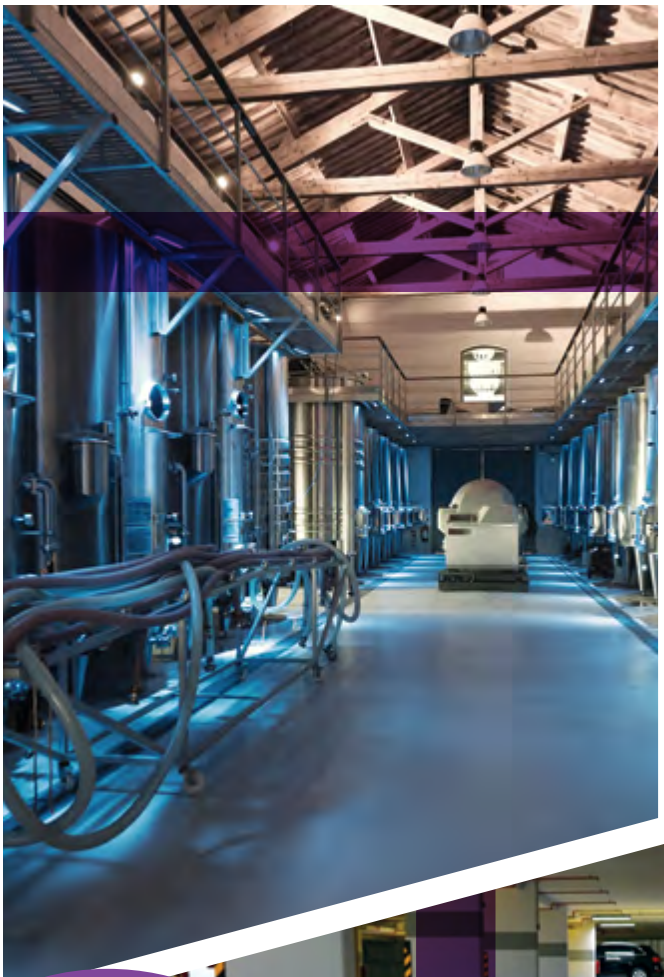
RESIN FLOORING

EPOXY & POLYURETHANE FLOOR COATINGS



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#buildingquality

Contents

Introduction

Reaction resin flooring systems are thin layers of epoxy or polyurethane resins that develop high mechanical strength and chemical resistance after hardening. They can be applied to both new or old floors subject to high mechanical loads and chemicals.

Epoxy floor coatings feature excellent durability while keeping maintenance costs low. Furthermore, they deliver a smooth, durable, non-absorbent and easy-to-clean final surface.

Polyurethane floor coatings feature excellent resistance to UV radiation and weathering and can be applied both indoors and outdoors.

Given its long experience and deep expertise, **ISOMAT** has developed a complete range of high-quality, durable and attractive resin flooring systems that fulfill both functional and aesthetic requirements. No matter what your flooring problem is, count on **ISOMAT** for the right solution.

PROPERTIES OF RESIN FLOORING

High mechanical strength

Resin flooring is highly resistant to wear and tear, making it ideal for areas subject to high traffic and heavy usage, such as manufacturing facilities, warehouses, craft industries, parking garages, hotels, shopping malls, etc. Key benefits:

- Increased resistance to abrasion, offering protection against dust and wear
- Excellent compressive strength
- Strong adhesion to the substrate that hinders delamination
- High surface hardness that prevents scratches

Exceptional chemical resistance

Resin flooring features high resistance to chemicals, meaning it is a robust solution for demanding industrial and commercial settings, including manufacturing plants, slaughterhouses, gas stations, auto repair shops, etc. This flooring option can withstand exposure to:

- Solutions of organic and inorganic acids
- Solvents, alkalis, salts, petroleum products, lubricants, aggressive cleaning agents, seawater, etc.

Hygiene - easy cleaning

Delivering a smooth, seamless surface with low absorbency, resin flooring ensures ease of cleaning along with optimal hygiene conditions. Plus, a wide range of **ISOMAT** resin floor coatings have been certified as suitable for use in food processing areas, warehouses, cold storage rooms, etc., where strict hygiene standards must be maintained.

Fire resistance

In certain fields of application (e.g., industrial facilities, parking garages, etc.) there is an increased demand for a high fire safety level in buildings. A wide range of **ISOMAT** resin floor coatings has been tested by third-party laboratories and successfully classified as Bfl - s1 according to EN 13501-1.

Slip-resistant finish option

Depending on how the system is installed, resin flooring can achieve - apart from the smooth finish - varying levels of slip resistance, making it suitable for use in areas where there is a high risk of slipping (e.g., production facilities, ramps, etc.).

Application on particularly difficult substrates

Resin floor coatings are usually applied on well prepared, clean and dry cementitious substrates that are at least 28 days old. However, they can also be applied to substrates that are only 7 days old or appear to have rising damp problems, provided that the appropriate primers are used. Moreover, they can be installed to oil-contaminated substrates, provided that they have been previously chemically treated with special cleaning agents.

CE marking

ISOMAT resin floor coatings are certified according to EN 13813 and EN 1504-2. CE marked.

Cost-effective floor renovation solution

Being easy-to-apply and walk-on ready shortly after installation, resin flooring constitutes a highly sought-after floor renovation solution for those on a budget. Plus, it lasts longer than other floor covering alternatives.

Quick installation & job turnaround

Resin flooring systems are known for their quick installation process. However, substrate condition, needed preparation and the type of the flooring to be applied must always be taken into account. Once installed, the new resin floor will be walk-on ready in just one day later and can be exposed to maximum load in around seven days' time, depending on temperature conditions.

Custom colors

Epoxy and polyurethane resin floor coatings can be produced in a wide range of colors to meet specific project requirements (e.g. floor marking and floor lining) and allow for design freedom and customization to suit any design aesthetic. In addition, in case where a decorative finish is desired instead of a monochromatic look, the decorative Flake Flooring could be installed for an individual, tailor-made flooring design. Flake Flooring is fully customizable, providing numerous combinations for a unique, modern aesthetic result that also helps hide dirt and imperfections compared to monochromatic surfaces.

*For more information regarding **ISOMAT**'s Flake Flooring, please refer to the DECORATIVE FLOORINGS brochure.

Additional properties of epoxy floor coatings

Electrical conductivity

In specific environments where static electricity poses a great danger, such as computer rooms, surgery rooms, x-ray rooms, print shops, textile factories, gas stations, power stations, ammunition warehouses, etc., installing a conductive epoxy flooring to help eliminate the build-up of electrostatic charge through friction and minimize the risk of damage is strongly recommended.

Additional properties of polyurethane floor coatings

Resistance to solar radiation

Aliphatic polyurethane floor coatings provide UV stability, meaning they won't turn yellow over time. They are therefore, if left exposed, the only suitable option when it comes to outdoor applications. Also recommended for indoor applications in spaces with big windows that allow ample sunlight to enter.

High flexibility - Resistance to a wide temperature range

Polyurethane floor coatings have been tested in extreme temperature conditions without degradation of their properties, provided that the change in temperature is gradual. This is why they are selected for use both in areas where particularly low or high temperatures prevail (e.g. cold storage rooms, freezers) and in areas where high temperatures develop (e.g.manufacturing facilities, auto repair shops, etc.). Plus, featuring high flexibility, they are ideal for outdoor applications and other areas where flexibility is essential, such as substrates subject to expansion/ contraction and vibration.

INSTALLATION PROCESS OF RESIN FLOORING SYSTEMS

FOUR-STEP INSTALLATION PROCESS

1. **Substrate preparation**
2. **Priming**
3. **Crack-filling & repair**
4. **Resin flooring installation**

In every step of the installation process, it is important to use the proper tools and materials and have good knowledge of all construction details, to ensure a sound construction solution.

Step 1 Substrate preparation

The successful installation of a resin flooring system starts with the proper preparation of the substrate. The substrate (industrial floor, concrete slab, cementitious screed, terrazzo) must be sound, stable, dry (moisture content < 4%) and free of oil, grease, dirt, dust, loose particles or any other contaminant that might act as a bond breaker.

Moisture content determination

Cementitious floors that are at least 28 days old usually have a moisture content lower than 4%. However, when the concrete is relatively fresh, exposed to rising damp or wet due to the use of the existing area, then the moisture content is usually higher than 4%.

Moisture testing is a crucial step in the preparation of any floor and acting correctly on the test results by selecting the right materials will ensure a successful floor covering installation and prevent any possible system failure. Substrate moisture content can be measured and determined by means of a variety of suitable devices and test methods. Those include the following:


a


b

a. Digital, non-destructive moisture meter

There is a number of options for quickly and easily measuring moisture levels using a non-destructive moisture meter. The pinless, frequency sensing technology moisture meter and the hand-held electronic impedance moisture meter are the ones most commonly used today.

b. Calcium carbide method

The calcium carbide method uses the reactivity of calcium carbide with water. This is one of the most accurate and reliable methods of measuring the moisture content of cementitious floors, but destructive for the substrate as a concrete sample is taken.

Treatment of expansion contraction joints

When it come to cementitious substrates, it is crucial to prepare a grid of joints, in order to prevent hairline cracks during the hardening of the new floor (due to shrinkage of concrete) and during its working time (due to expansion-contraction). The dimensions of the grid should be maximum 5x5 m. After the application of the flooring system, joints are sealed/ filled with an elastomeric sealant like **FLEX PU-40**.

Substrate grinding and cleaning

The substrate must be properly prepared by rubbing, pellet blasting, grinding, etc. in order to remove cement skin and achieve an open porous surface. This will help the primer penetrate deeper into the pores and induce increased anchoring and bonding of the flooring to be laid, as well as provide sufficient surface leveling. Subsequently, all dust and loose particles should be thoroughly removed with a high-suction vacuum cleaner.

1a. Treating the surface with a terrazzo polishing machine. **1b.** Grinding the surface by shot blasting**. 2.** Treatment residue and dust are cleaned with a high-suction vacuum cleaner.

Substrates contaminated with oils

Surfaces contaminated with oils require thorough cleaning prior to floor covering installation.

At first, the floor is cleaned from dirt by hot water blasting. Then, it is rubbed by a terrazzo polishing machine or shot blasting in order to reach a stable, open porous surface. Then, treatment residue and dust are cleaned with a high-suction vacuum cleaner.

Subsequently, the industrial cleaning agent **FD-CLEAN** is spread onto the surface and rubbed diligently with a hard brush, thus enabling the material to penetrate the floor pores and emulsify the oil. After about 30 minutes, depending on in-situ conditions, the emulsified oil is removed by hot water blasting. Then, the floor should be primed with **DUROPRIMER-SG**, before the oil rises to the floor surface again. During priming, surface should not be totally saturated with water (or have standing water).

Hot water blasting to remove the oil from the floor.

Metal substrates

Metal substrates (e.g. lofts) to be covered with resin coatings must be free of rust and any type of erosion to ensure good bonding.

These substrates should be treated with sandblasting. Finally, the surface should be thoroughly cleaned with a high-suction vacuum cleaner.

Sandblasting on metal substrate for rust removal.

Step 2 Priming

Priming shall take place on the thoroughly prepared surface to ensure the proper adhesion of the subsequent flooring. **ISOMAT** offers a wide range of primers — solvent-based, solvent-free and water-based — suitable for all substrates, including cementitious or metal substrates, green concrete, cementitious substrates with rising damp or contaminated with oil. During the application, the primer penetrates and anchors into the pores of the substrate, thus stabilizing the substrate and acting as a bonding layer between the substrate and the final coating.

Epoxy primers

In case the presence of solvents is not desirable (e.g. confined spaces with insufficient ventilation) and moisture content is < 4%, the use of a solvent-free epoxy primer is recommended (**DUROFLOOR-PSF**, **DUROPRIMER-PRO**). Additionally, in case of dry to slightly wet substrates (without standing water), the use of a water-based epoxy primer is recommended (**EPOXYPRIMER-500**). In case the selected epoxy floor is to be installed on wet surface, the use of a special epoxy primer is recommended (**DUROPRIMER-SG**). In general, for the application of an epoxy primer, the surface must be dry, clean, stable and healthy. As far as two-component primers are concerned, firstly component A is stirred and then the whole quantity of component B is added to component A. The two components are mixed with a low-speed mixer (300 rpm). Then it is applied by roller, brush or airless spray in one layer (or more if needed).

DUROPRIMER

Two-component, epoxy primer

CE EN 13813 SR-B2,0

Cement-based substrates (industrial floors, concrete, cement screed, terrazzo) are primed with the two-component, solvent-based epoxy primer **DUROPRIMER** that offers high hardness and abrasion resistance. The solvents in its composition enable the primer to penetrate deep into the substrate, providing excellent anchoring. The selected epoxy system can be installed within 24 hours from priming, provided that it has dried.

Consumption: 200-300 g/m^2, depending on substrate absorbency.

Packaging (A+B): 9 kg.

DUROFLOOR-PSF

Two-component, solvent-free epoxy primer

CE EN 1504-2 C EN 13813 SR-B2,0-AR0,5-IR4

DUROFLOOR-PSF is used for priming cementitious surfaces to be covered with epoxy floor coatings from the **DUROFLOOR** range and for sealing cementitious floors in industrial areas, warehouses, etc. Plus, with the addition of quartz sand, it is used for producing resin mortars and a repair material suitable for spall and crack repair prior to application of floor coatings. The selected epoxy system can be installed within 24 hours from priming, provided that it has dried.

Consumption: 200-300 g/m^2, depending on substrate absorbency.

Packaging (A+B): 5 kg, 10 kg, 25 kg.

DUROPRIMER-PRO

Two-component, solvent-free epoxy primer

CE EN 1504-2 C EN 13813 SR-B2,0-AR0,5-IR4

DUROPRIMER-PRO is used as a primer on surfaces to be covered with epoxy flooring systems. With the addition of quartz sand, it can be used as resin mortar or as a crack-repairing material. The selected epoxy system can be installed within 24 hours from priming, provided that it has dried.

Consumption: 250-400 g/m^2, depending on substrate absorbency.

Packaging (A+B): 10 kg, 30 kg.

EPOXYPRIMER-500

Two-component, water-based epoxy primer for slightly wet substrates

CE EN 13813 SR-B2,0

EPOXYPRIMER-500 is used as a primer on surfaces to be covered with epoxy flooring systems. It is applied on the substrate diluted with water up to 30% by weight. The selected epoxy system can be installed within 24-48 hours, provided that the moisture content of the primed surface is < 4%.

Consumption: 150-200 g/m^2, depending on substrate absorbency.

Packaging (A+B): 1 kg, 4 kg, 10 kg, 20 kg.

S-P-09185 EPD®
environdec.com

DUROPRIMER-SG

Two-component, special, epoxy primer for concrete floors

For oil-contaminated concrete floors or wet floors with rising damp, priming of the surface with the two-component special primer **DUROPRIMER-SG** is required. Oil-contaminated substrates must be chemically treated with **ISOMAT** special cleaning agent and then washed off (see p. 7). Due to its specific heavy weight, **DUROPRIMER-SG** can remove the water from the capillary pores of the substrate, while anchoring sufficiently. It is applied on the wet (but without standing water) substrate by a roller or squeegee and brushed thoroughly. The final epoxy coating can be installed within 24 hours and after the primer has dried.

Consumption: 600-1000 g/m^2.

Packaging (A+B): 10 kg.

CE EN 13813 SR-B2,0

DUROFLOOR-CMT

Three-component, self-leveling, solvent-free epoxy flooring

DUROFLOOR-CMT is used for repairing and leveling cement-based floors to be covered with **DUROFLOOR** epoxy systems, polyurethane coatings, plastic flooring, wooden flooring, etc. It is also applied in cases where the floor is relatively fresh or subject to rising damp in order to prepare the substrate for the application of epoxy or polyurethane coatings, avoiding delamination problems.

Consumption: ~ 2.1 kg/m^2/mm of layer thickness (max. thickness application 3 mm).

Packaging (A+B+C): 25 kg.

CE EN 13813 CT-C50-F10-AR0,5

EPOXYCOAT-AC

Two-component, anti-corrosion epoxy primer for metal surfaces

EPOXYCOAT-AC is a two-component, colored epoxy system with solvents. It offers excellent protection against corrosion for metal surfaces. **EPOXYCOAT-AC** is applied by roller, brush or airless spray in one or two layers. The second layer is applied within 24 hours, after the first one has dried. The selected epoxy or polyurethane coating should be installed within the next 24 hours, after the second coat of the anti-corrosion epoxy primer has dried.

Coverage: 150-200 g/m^2/coat.

Packaging (A+B): 3 kg, 8 kg in RAL 7040 (window grey) and 8 kg in RAL 3009 (oxide red).

CE EN 1504-7 C

Polyurethane primers

Contrary to epoxy primers, which are suitable for both epoxy and polyurethane floorings, polyurethane primers are suitable only for polyurethane floorings.

PRIMER-PU 100

One-component, polyurethane primer

PRIMER-PU 100 is applied on porous substrates to ensure the proper adhesion of the polyurethane coatings **DUROFLOOR-PU 211** and **TOPCOAT-PU 720**. It is a solvent-based primer suitable for absorbent substrates like concrete, cement screed, wood, etc. The surface to be primed must be dry, free of dust, grease, dirt, etc. **PRIMER-PU 100** is thoroughly stirred and uniformly applied on the substrate by brush, roller or airless spray.

Consumption: 200-300 g/m^2.

Packaging: 1 kg, 5 kg, 17 kg.

PRIMER-PU 140

Two-component, solvent-free polyurethane primer

PRIMER-PU 140 is applied on porous or non-porous substrates to ensure the proper adhesion of the polyurethane coatings **DUROFLOOR-PU 211** and **TOPCOAT-PU 720**. Suitable for substrates such as concrete, cement screed, wood, old waterproofing layers, bituminous waterproofing membranes coated with granules, etc. Recommended for substrates with high moisture content. The surface to be primed must be free of dust, grease, dirt, etc.

Consumption: 100-250 g/m^2.

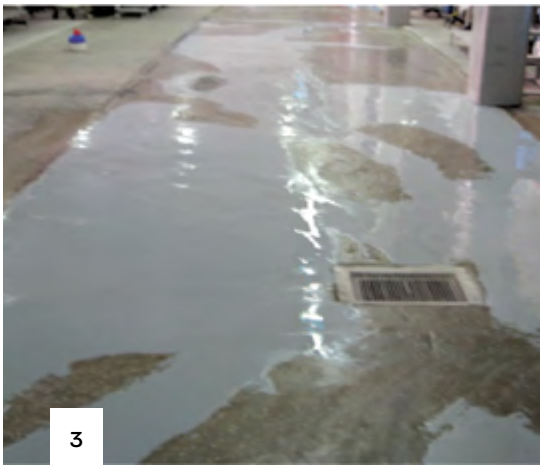
Packaging (A+B): 1 kg, 4 kg, 20 kg.

Step 3 Crack-filling & repair

After the primer has dried and prior to the application of the final resin floor coating, any existing substrate imperfections (cracks, holes, irregularities, etc.) should be filled in order to achieve a smooth and uniform surface. In case the substrate has deep cracks (0.5-3.0 mm) wide, **EPOMAX-L10** can be used. Patching and filling of surface irregularities, imperfections or cracks can be done with the ready-to-use epoxy putties **EPOMAX-EK** and **EPOMAX-STUCCO** or by preparing a resin mortar mixing an epoxy primer like **DUROFLOOR-PSF** or **DUROPRIMER-PRO** with suitable quartz sand. When it comes to repairing large expansion-contraction joints, the use of the pourable epoxy grout **EPOMAX-MT** is recommended. The resin flooring should be applied after the repair material has sufficiently hardened and within the time limits set for each type of primer (pages 8-9).


1


2


3

1. Filling cracks in industrial floor. **2.** Filling holes in industrial floor. **3.** Full surface application of repair resin mortar to restore the smoothness of the surface.

EPOMAX-L10

Two-component, epoxy injection resin for cracks 0.5-3.0 mm wide

EPOMAX-L10 is a two-component, colorless epoxy system, without solvents. After hardening, it offers very strong adhesion to concrete and steel, as well as high compressive and flexural strength, even when applied on damp substrates. The whole quantity of component B is added to component A and the two components are mixed with a small trowel.

Consumption: ~ 1.1 kg to fill an empty space of 1 l.

Packaging (A+B): 1 kg, 3 kg.

CE EN 1504-5

EPOMAX-EK

Two-component epoxy adhesive for filling, sealing and bonding

EPOMAX-EK is a two-component epoxy system without solvents. After hardening, it offers very strong bonding to the substrate, high hardness and high mechanical resistance. The whole quantity of component B is added to component A and the two components are mixed with a small trowel.

Consumption: ~ 1.85 kg/m^2/mm of layer thickness.

Packaging (A+B): 1 kg, 4 kg.

CE EN 1504-4 C

EPOMAX-STUCCO

Two-component, extra fine-grained epoxy filler

CE
EN 1504-4
C

EPOMAX-STUCCO is a two-component epoxy system without solvents. After hardening, it offers strong bonding to the substrate, high hardness and high mechanical resistance. The whole quantities of component A and component B are placed into a clean container and mixed with a small trowel.

Consumption: ~ 1.35 kg/m^2/mm.

Packaging (A+B): 1 kg.

EPOMAX-MT

Three-component, high-strength, flowable, non-shrink epoxy grout

CE
EN 1504-3
PC R2
EN 1504-6

EPOMAX-MT is a three-component high-strength, flowable, non-shrink grout, based on a two-component, solvent-free epoxy resin (components A & B) and a specially graded quartz sand (component C). After hardening, it offers very good fluidity, high initial and final strength, excellent adhesion to steel and concrete, resistance to impact and vibration, chemical resistance and waterproofing. The whole quantity of component B is added to component A and the two components are mixed with a low-speed mixer (300 rpm). The mixed A and B components are placed into a larger clean container and mixed with a low-speed mixer while component C is slowly added. Maximum application thickness: 5 cm.

Consumption: ~ 1.9 kg/l.

Packaging (A+B+C): 25 kg.

Step 4 Resin flooring installation

Depending on the required strength and chemical resistance of the floor and its intended properties, the appropriate flooring system and the proper application method are selected. **DUROFLOOR** and **DUROFLOOR-SLF** are self-leveling epoxy floorings suitable for areas that are subject to high mechanical loads, **DUROFLOOR-R** is an epoxy coating suitable for areas subject to high wear, while **DUROFLOOR-11** can be applied as an epoxy coating or as a self-leveling epoxy flooring. **DUROFLOOR-PU** and **TOPCOAT-PU 720** are polyurethane coatings with excellent resistance to solar radiation, thus being suitable for exterior applications. **DUROFLOOR-PUC MF6** is a self-leveling flooring system based on cement and polyurethane resins, offering exceptional chemical resistance. **DUROFLOOR-PU 211** can be applied as a self-leveling polyurethane flooring or as a polyurethane coating. Finally, **DUROFLOOR-C** is a self-leveling, conductive epoxy flooring suitable for spaces where static electricity is undesirable.

Epoxy floor coatings

DUROFLOOR

Two-component, self-leveling epoxy flooring

DUROFLOOR is a two-component, colored, ~ 100 solids, self-leveling epoxy system. It offers high strength and abrasion resistance. It is resistant to organic and inorganic acids, alkalis, petroleum products, waste, water, seawater and numerous solvents. Also, it is resistant to temperatures ranging from -30°C to +100°C in dry loading and, up to +60°C in wet loading. During application, it is mixed with 0-0.4 mm quartz sand (or Q35) at a ratio of 1:2 by weight. It is applied at a thickness of 2 mm to 3 mm with a notched trowel.

DUROFLOOR is used as a pourable, self-leveling flooring on cement-based floors where high mechanical or chemical resistance is required. Suitable for industrial facilities, warehouses, stores, supermarkets, hotels, auto repair shops, parking garages, gas stations, heavy-traffic areas, slaughterhouses, laboratories, hospitals, wineries, canning factories, etc.

Consumption: DUROFLOOR (A+B): 0.6 kg/m²/mm.

Q35: 1.2 kg/m²/mm (mixing ratio DUROFLOOR:Q35 = 1:2).

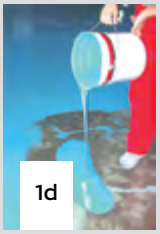
Packaging (A+B): 9 kg in 7 selected RAL colors. Q35 quartz sand is supplied in 18 kg bags.

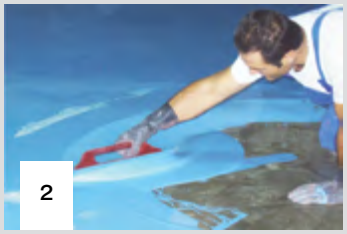
CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR4

Suitable For Food Industry

FIRE RESISTANCE
B-s1, EN 13501-1

Installation of DUROFLOOR self-leveling epoxy flooring





Components A (resin) and B (hardener) are packaged in two separate containers at a predetermined mixing ratio by weight. Before the application, it is recommended to slightly stir component A for 1 minute until it becomes homogeneous. **1a.** All of component B is added to component A. The two components should be mixed for about 3 minutes with a low-speed mixer (300 rpm). It is important to stir the mixture thoroughly near the sides and bottom of the container in order to achieve homogeneous dispersion of the hardener. **1b.** & **1c.** Next, the mixture is poured into a clean container where quartz sand of a particle size of 0-0.4 mm (or Q35) is gradually added under continuous stirring, at a ratio of 1:2 by weight until a uniform epoxy mortar is formed. Mixing should continue for about 3 minutes until the resin mortar is fully homogeneous. **1d.** Then, the resin mortar is poured onto the primed surface. **2.** It is applied at a thickness of 2-3 mm with a notched trowel. Alternatively, an adjustable floor finish scraper may be used.

Consumption of DUROFLOOR is 600 g/m^2/mm of layer thickness and that of quartz sand is 1.2 kg/m^2/mm of layer thickness.

3. The recently applied flooring layer should be rolled with a special spiked roller to facilitate the release of any entrapped air and thus avoid the creation of air bubbles that may otherwise appear on the epoxy flooring surface. During application, the use of spiked shoes is required. Thanks to its low viscosity, the mixture has self-leveling properties, while providing a smooth final surface. Given the high fluidity of the initial mixture, in case DUROFLOOR is installed onto sloped surfaces (e.g. ramps), the addition of a thixotropic thickening agent at a percentage of 0.5% by weight is needed.

DUROFLOOR properties

DUROFLOOR colors

- RAL 7032 (Pebble grey)
- RAL 7035 (Light grey)
- RAL 7040 (Window grey)
- RAL 3009 (Oxide red)
- RAL 1015 (Light ivory)
- RAL 1013 (Oyster white)
- RAL 6021 (Pale green)

These colors are indicative only and may slightly vary from real ones.

More colors are available for a minimum order quantity of 135 kg.

TECHNICAL DATA

PROPERTIES		DUROFLOOR (A+B) + Q35	STANDARD
PHYSICAL			
Density		1.74 kg/l	
Viscosity		~ 15,000 mPa.s	BROOKFIELD
Minimum hardening temperature		+8°C	
Walkability (+23°C)		24 h	
Final strength (+23°C)		7 days	
Reaction to fire		B_{fl}-s1	EN 13501-1
Resistance to temperature variations	Dry loading	-30°C up to +100°C	
	Wet loading	-30°C up to +60°C	
MECHANICAL			
Abrasion resistance - Taber test (CS 10/1000/1000)		80.5 mg	ASTM D 4060
Wear resistance - BCA		AR0.5	EN 13892-4
Impact resistance		IR4	EN ISO 6272
Adhesion strength		> 3.0 MPa	EN 13892-8
Hardness		80 - SHORE D	DIN 53505
Water absorption (24 hours)		0.25 % w/w	ASTM D 570
CHEMICAL			
Direct contact with food		Suitable	W-347, ISO 8467
Resistance to chemicals* * For more details, please contact ISOMAT's Technical Support team at support@isomat.eu.			

DUROFLOOR-SLF

Two-component, self-leveling epoxy flooring

DUROFLOOR-SLF is a two-component, ~ 100 solids, colored, self-leveling epoxy system offering high strength and abrasion resistance. It is resistant to organic and inorganic acids, alkalis, petroleum products, waste, water, seawater and numerous solvents. Also, it is resistant to temperatures ranging from -30°C to +100°C in dry loading and, up to +60°C in wet loading. **DUROFLOOR-SLF** is used as a pourable self-leveling epoxy flooring with the addition of 0.1-0.4 mm particle size quartz sand (or M32) at a 1:1 ratio by weight. Applicable at a thickness of 2-3 mm with a notched trowel.

DUROFLOOR-SLF is used as a pourable self-leveling flooring on cement-based floors where high mechanical or chemical resistance is required. Suitable for industrial facilities, warehouses, stores, supermarkets, hotels, auto repair shops, parking garages, gas stations, heavy-traffic areas, slaughterhouses, laboratories, hospitals, wineries, canning factories, etc.

Consumption DUROFLOOR-SLF (A+B): 0.85 kg/m^2/mm.

M32 quartz sand: 0.85 kg/m^2/mm.

Packaging (A+B): 20 kg in 3 selected RAL colors.

M32 quartz sand is supplied in 25 kg bags.

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR4

FIRE RESISTANCE
B$_{fl}$-s1, EN 13501-1

DUROFLOOR-SLF properties

DUROFLOOR-SLF colors

RAL 7032 (Pebble grey)

RAL 7035 (Light grey)

RAL 7040 (Window grey)

These colors are indicative only and may slightly vary from real ones.

More colors are available for a minimum order quantity of 160 kg.

TECHNICAL DATA

PROPERTIES		DUROFLOOR-SLF (A+B) + M32	STANDARD
PHYSICAL			
Density		1.75 kg/l	
Viscosity		~ 10,000 mPa.s	BROOKFIELD
Minimum hardening temperature		+8°C	
Walkability (+23°C)		24 h	
Final strength (+23°C)		7 days	
Reaction to fire		B_{fl}-s1	EN 13501-1
Resistance to temperature variations	Dry loading	-30°C up to +100°C	
	Wet loading	-30°C up to +60°C	
MECHANICAL			
Abrasion resistance - Taber test (CS 10/1000/1000)		40 mg	ASTM D 4060
Wear resistance - BCA		AR0.5	EN 13892-4
Impact resistance		IR4	EN ISO 6272
Adhesion strength		≥ 3.0 MPa	EN 13892-8
Hardness		80 - SHORE D	DIN 53505
Water absorption (24 hours)		0.25 % w/w	ASTM D 570
CHEMICAL			
Resistance to chemicals* * For more details, please contact ISOMAT's Technical Support team at support@isomat.eu.			

DUROFLOOR-R

Two-component, epoxy floor coating

DUROFLOOR-R is a two-component, ~ 100 solids, roller-applied, colored epoxy system, offering high strength and abrasion resistance. It is resistant to organic and inorganic acids, alkalis, petroleum products, certain solvents, waste, water and seawater. It is resistant to temperatures ranging from -30°C up to +100°C in dry loading and up to +60°C in wet loading.

DUROFLOOR-R is used as a coating on floors that require high mechanical or chemical resistance. It is suitable for cement-based substrates, (e.g. concrete, cement screed) steel and iron surfaces in industrial facilities, warehouses, auto repair shops, parking garages, slaughterhouses, laboratories, hospitals, wineries, canning factories, etc.

Consumption: 250-300 g/m²/layer.

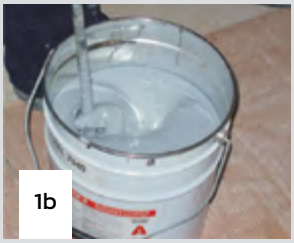
Packaging (A+B): 10 kg, 24 kg in 8 selected RAL colors.

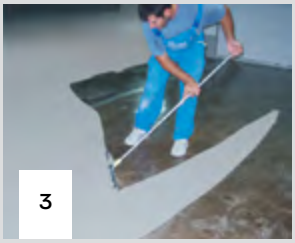
CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR4

Suitable For Food Industry

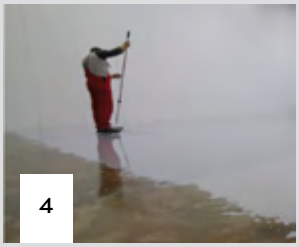
FIRE RESISTANCE

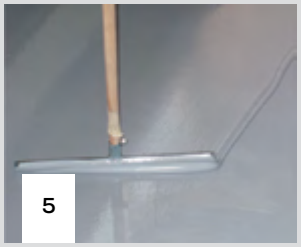
Installation of epoxy coatings

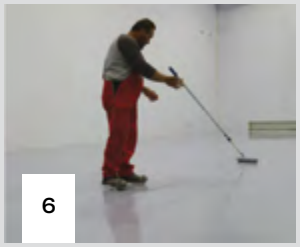


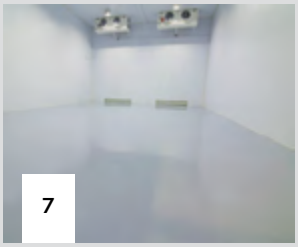


Components A (resin) and B (hardener) are packaged in two separate containers at a predetermined mixing ratio by weight. Before the application, it is recommended to slightly stir component A for 1 minute until it becomes homogeneous. **1a.** The whole quantity of component B is added to component A. **1b.** The two components should be mixed for about 3 minutes, with a low-speed mixer (300 rpm). It is important to stir the mixture thoroughly near the sides and bottom of the container in order to achieve uniform dispersion of the hardener. To ensure thorough mixing, the mixture is poured into a clean container and mixed again for at least 1 minute until fully homogeneous. **2.** Afterwards, DUROFLOOR-R is poured onto the primed substrate. **3.** Then, it is spread with a squeegee on the primed substrate.









4. The fresh layer is treated with a short or medium pile roller to enable good anchoring and uniform distribution of the material, thus ensuring the same thickness all over the floor surface. The use of spiked shoes is necessary for such an application. **5**, **6** & **7.** Within 24 hours, and after the first layer of DUROFLOOR-R has dried, the second layer can be applied by the same method. Consumption of DUROFLOOR-R per layer is 250-300 g/m^2/layer. Due to the fluidity of the product, in case of installing DUROFLOOR-R onto inclined or vertical surfaces (e.g. stairways, ramps, base boards, etc.), a thixotropic thickening agent should be added at a percentage of 2% by weight, in order to increase the thixotropy of DUROFLOOR-R.

DUROFLOOR-R properties

DUROFLOOR-R colors

- RAL 7032 (Pebble grey)
- RAL 7035 (Light grey)
- RAL 7040 (Window grey)
- RAL 3009 (Oxide red)
- RAL 1015 (Light ivory)
- RAL 1013 (Oyster white)
- RAL 6021 (Pale green)
- RAL 5024 (Pastel blue)

These colors are indicative only and may slightly vary from real ones.

More colors are available for a minimum order quantity of 150 kg.

TECHNICAL DATA

PROPERTIES		DUROFLOOR -R	STANDARD
PHYSICAL			
Density		1.46 kg/l	
Viscosity		~ 1,900 mPa.s	BROOKFIELD
Minimum hardening temperature		+8°C	
Walkability (+23°C)		24 h	
Final strength (+23°C)		7 days	
Reaction to fire		B_{fl}-s1	EN 13501-1
Resistance to temperature variations	Dry loading	-30°C up to +100°C	
	Wet loading	-30°C up to +60°C	
MECHANICAL			
Abrasion resistance - Taber test (CS 10/1000/1000)		76.6 mg	ASTM D 4060
Wear resistance - BCA		AR0.5	EN 13892-4
Impact resistance		IR4	EN ISO 6272
Adhesion strength		> 3.0 MPa	EN 13892-8
Hardness		80 - SHORE D	DIN 53505
Water absorption (24 hours)		0.29 % w/w	ASTM D 570
CHEMICAL			
Direct contact with food		Suitable	W-347, ISO 8467
Resistance to chemicals* * For more details, please contact ISOMAT's Technical Support team at support@isomat.eu.			

DUROFLOOR-11

Two-component, epoxy coating and self-leveling flooring

DUROFLOOR-11 is a two-component, ~ 100 solids, colored epoxy system. It offers high strength and abrasion resistance. It is resistant to organic and inorganic acids, alkalis, petroleum products, waste, water, seawater and numerous solvents. It is resistant to temperatures ranging from -30ºC to +100ºC in dry loading and up to +60ºC in wet loading.

DUROFLOOR-11 is used as a roller-applied coating to cement-based, steel and iron surfaces requiring high mechanical strength or chemical resistance. In this case, its application is similar to DUROFLOOR-R.

It can also be used as a self-leveling epoxy flooring on cement-based floors with the addition of quartz sand with a particle size of 0.1-0.4 mm (or M32) at a 1:1 ratio by weight. In this case, its application is similar to **DUROFLOOR** and **DUROFLOOR-SLF**.

Suitable for industrial facilities, warehouses, stores, supermarkets, hotels, auto repair shops, parking garages, gas stations, heavy-traffic areas, slaughterhouses, laboratories, hospitals, wineries, canning factories, etc.

Consumption: As roller-applied epoxy coating: 250-300 g/m^2.

As self-leveling epoxy flooring with M32 quartz sand:

DUROFLOOR-11 (A+B): 0.85 kg/m^2/mm. M32: 0.85 kg/m^2/mm.

Packaging (A+B): 20 kg, 30 kg in 3 selected RAL colors.

M32 quartz sand is supplied in 25 kg bags.

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR4

FIRE RESISTANCE
B-s1, EN 13501-1

DGUV Test
IFA 2404070
R12 slip resistance classification group
V - displacement volume classification group
dguv.de/pruefzeichen

DGUV Test
IFA 2404071
R12 slip resistance classification group
V - displacement volume classification group
dguv.de/pruefzeichen

DUROFLOOR-11 properties

TECHNICAL DATA

PROPERTIES		DUROFLOOR-11 as coating	DUROFLOOR-11 (A+B) + M32 as self-leveling flooring	STANDARD
PHYSICAL				
Density		1.40 kg/l	1.75 kg/l	
Viscosity		~ 1,400 mPa.s	~ 10,000 mPa.s	BROOKFIELD
Minimum hardening temperature		+8°C	+8°C	
Walkability (+23°C)		24 h	24 h	
Final strength (+23°C)		7 days	7 days	
Reaction to fire		B_{fl} - s1	B_{fl} - s1	EN 13501-1
Resistance to temperature variations	Dry loading	-30°C up to +100°C	-30°C up to +100°C	
	Wet loading	-30°C up to +60°C	-30°C up to +60°C	
MECHANICAL				
Abrasion resistance - Taber test (CS 10/1000/1000)		~40 mg	~40 mg	ASTM D 4060
Wear resistance - BCA		AR0.5	AR0.5	EN 13892-4
Impact resistance		IR4	IR4	EN ISO 6272
Adhesion strength		≥ 3.0 MPa	≥ 3.0 MPa	EN 13892-8
Hardness		80 - SHORE D	80 - SHORE D	DIN 53505
Water absorption (24 hours)		0.28 % w/w	0.25 % w/w	ASTM D 570

DUROFLOOR-11 colors

RAL 7032 (Pebble grey)

RAL 7035 (Light grey)

RAL 7040 (Window grey)

These colors are indicative only and may slightly vary from real ones.

More colors are available for a minimum order quantity of 160 kg.

Polyurethane floor coatings

DUROFLOOR-PU

Two-component, polyurethane floor coating

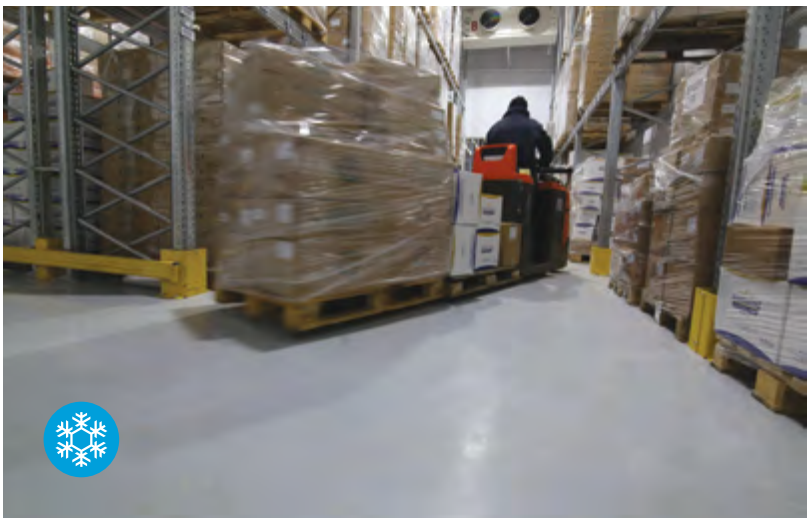
DUROFLOOR-PU is a two-component, colored, aliphatic polyurethane system. After its application, it forms a strong and elastic membrane with excellent resistance to solar radiation (UV) and weather conditions. It is resistant to abrasion, organic and inorganic acids, alkalis, petroleum products, certain solvents, waste, water, seawater and weather conditions. It is resistant to temperatures ranging from -30°C to +100°C in dry loading and up to +60°C in wet loading.

DUROFLOOR-PU is used as a coating on floors that require high elasticity, mechanical and chemical strength. It can be applied on cement-based substrates, steel or iron surfaces and existing epoxy floors. It is suitable for indoor and outdoor applications in cold storage rooms (chillers and freezers), craft industries, warehouses, laboratories, hospitals, wine factories, slaughterhouses, canning factories, garages, auto repair shops, etc.

Consumption: 250-300 g/m²/layer.

Packaging (A+B): 10 kg in RAL 7040 (window grey).

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR5



DUROFLOOR-PU properties

DUROFLOOR-PU color

RAL 7040
(Window grey)

This color is indicative only and may slightly vary from real one.

More colors are available for a minimum order quantity of 100 kg.

UV-stable

TECHNICAL DATA

PROPERTIES		DUROFLOOR-PU	STANDARD
PHYSICAL			
Density		1.35 kg/l	
Viscosity		~ 1,400 mPa.s	BROOKFIELD
Minimum hardening temperature		+8°C	
Walkability (+23°C)		24 h	
Final strength (+23°C)		7 days	
Resistance to temperature variations	Dry loading	-30°C up to +100°C	
	Wet loading	-30°C up to +60°C	
MECHANICAL			
Wear resistance - BCA		AR0.5	EN 13892-4
Impact resistance		IR5	EN ISO 6272
Adhesion strength		> 3.0 MPa	EN 13892-8
Tensile strength		~ 14 N/mm²	EN 527-3
Elongation at break		~40%	EN 527-3
Hardness		47 - SHORE D	DIN 53505

TOPCOAT-PU 720

Pigmented, elastic, UV-stable, polyurethane protective coating

TOPCOAT-PU 720 is a one-component, colored, aliphatic, polyurethane coating with excellent resistance to solar radiation (UV) and weather conditions. It is resistant to temperatures ranging from -40°C to +90°C in dry loading. It is used as a coating on floors that require high elasticity, mechanical and chemical strength. It can be applied on cement-based substrates, steel or iron surfaces and existing epoxy floors. It is suitable for indoor and outdoor applications, including warehouses, garages, stadium stands, etc. Also suitable in cases where the polyurethane waterproofing coatings are subject to pedestrian traffic and light vehicular traffic (e.g. parking decks).

Consumption: 0.12-0.25 kg/m^2/layer.

Packaging: 1 kg, 5 kg, 20 kg in grey and white.

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR8

ENERGY SAVING COOL PAINT SOLAR REFLECTIVE PAINT

TOPCOAT-PU 720 properties

TOPCOAT-PU 720 colors

Grey

White

These colors are indicative only and may slightly vary from real ones.

More colors are available for a minimum order quantity of 160 kg.

UV-stable

TECHNICAL DATA

PROPERTIES		TOPCOAT-PU 720	STANDARD
PHYSICAL			
Density		1.19 ± 0.01 kg/l	
Viscosity		360-500 mPa.s (+23°C)	BROOKFIELD
Minimum hardening temperature		+5°C	
Walkability (+23°C)		24 h	
Final strength (+23°C)		7 days	
Solar Reflectance (White)		88%	ASTM E903-96
Resistance to temperature variations	Dry loading	-40°C up to +90°C	
MECHANICAL			
Wear resistance - BCA		AR0.5	EN 13892-4
Impact resistance		IR8	EN ISO 6272
Adhesion strength		> 2.0 MPa	EN 1542
Hardness		57 - SHORE D	DIN 53505
Capillary absorption		0.01 kg/m^2 h^{0,5}	EN 1602-3

DUROFLOOR-PUC MF6

Heavy-duty, self-leveling, fast-setting, three-component, polyurethane-cementitious floor screed

DUROFLOOR-PUC MF6 is a self-leveling, fast-setting flooring system, based on cement and polyurethane resins. It offers high mechanical strength and excellent chemical resistance. It is ideal when quick work is needed as it may be applied on 7-days concrete. It has excellent adhesion to the substrate, is quickly applied, has very good workability and self-leveling properties. It is odorless, non-toxic and easy-to-clean. It is suitable for the food and beverage industry, the pharmaceutical industry, commercial kitchens, cold rooms, hospitals, labs, etc. Also thanks to its properties, it can be used to spaces exposed to aggressive chemicals, heavy-traffic floors subject to shock, parking areas, etc. Colorable with **ISOMAT DECO-COLOR** pigments in powder form.

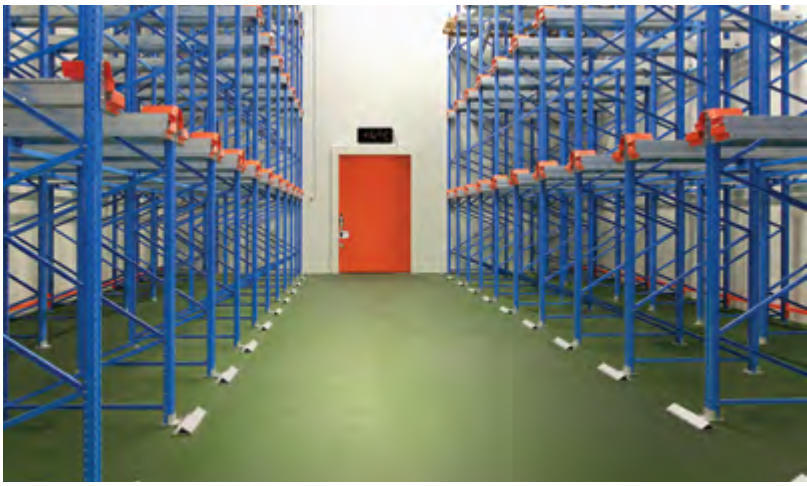
Consumption: ~ 1.8 kg/m²/mm of layer thickness.

Packaging (A+B+C): 34 kg.

CE EN 1504-2 C EN 13813 SR-B2,0-AR0,5-IR10

Suitable For Food Industry

FIRE RESISTANCE B_{fl}-s1, EN 13501-1



DUROFLOOR-PUC MF6 properties

Pigmented
DUROFLOOR-PUC MF6

- Black
- Dark Grey
- Yellow
- Ocher
- Green
- Red

These colors are indicative only and may slightly vary from real ones.

TECHNICAL DATA

PROPERTIES	DUROFLOOR-PUC MF6	STANDARD
PHYSICAL		
Density (A+B+C)	1.80 kg/l	
Pot life	~ 20 min (+20°C)	
Minimum hardening temperature	+8°C	
Walkability (+23°C)	8 h	
Final strength (+23°C)	4 days	
Reaction to fire	B_{fl}-s1	EN 13501-1
Resistance to temperature variations * depending on thickness application	-40°C up to +80°C	
MECHANICAL		
Wear resistance - BCA	AR0.5	EN 13892-4
Impact resistance	IR10	EN ISO 6272
Adhesion strength	> 3.0 MPa	EN 13892-8
Compression strength	48 - 52 MPa	EN 13892-2
Flexural strength	17 - 20 MPa	EN 13892-2
Hardness	> 80.0 - SHORE D	DIN 53505

DUROFLOOR-PU 211

Two-component, solvent-free, self-leveling, polyurethane floor coating

DUROFLOOR-PU 211 is a two-component, solvent-free, colored, polyurethane system, for indoor applications. It may also be used in outdoor applications if protected with an aliphatic polyurethane coating. It offers high mechanical strength, good reaction to chemical stresses and has hard-elastic properties. It has excellent adhesion to the substrate by using a proper primer, very good workability, low VOCs and is easy-to-clean. **DUROFLOOR-PU 211** can be applied as a thin-layer self-leveling coating or as a pourable thick-layer self-leveling coating with the addition of M32 quartz sand at a 1:0.7 ratio by weight. **DUROFLOOR-PU 211** is suitable for industrial storage and production facilities, commercial kitchens, cold rooms, hospitals and labs. Also it can be used in craft industries, warehouses, exhibition areas, shops, office spaces, auto repair shops, parking garages, etc.

Consumption: As self-leveling flooring (thickness ~ 1 mm): 1.25 kg/m²/mm.

As self-leveling flooring with M32 quartz sand (thickness > 1 mm):

DUROFLOOR-PU 211 (A+B): 0.93 kg/m²/mm. M32: 0.65 kg/m²/mm.

Packaging (A+B): 16 kg in RAL 7040 (window grey).

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR4

Suitable For Food Industry

FIRE RESISTANCE
B_{fl}-s1, EN 13501-1

DUROFLOOR-PU 211 properties

TECHNICAL DATA

PROPERTIES	DUROFLOOR-PU 211 + M32	DUROFLOOR-PU 211	STANDARD
PHYSICAL			
Density	1.58 kg/l	1.25 kg/l	
Viscosity	~ 5,500 mPa.s	~ 2,000 mPa.s	BROOKFIELD
Minimum hardening temperature	+8°C	+8°C	
Walkability (+23°C)	8 h	8 h	
Final strength (+23°C)	7 days	7 days	
Pot life (+20°C)	~ 25 min	~ 25 min	
Reaction to fire	B_{fl} - s1	B_{fl} - s1	EN 13501-1
Resistance to temperature variations - dry loading	-40°C up to +80°C	-40°C up to +80°C	
Thickness application	2-3 mm	1 mm	
MECHANICAL			
Wear resistance - BCA	AR0.5	AR0.5	EN 13892-4
Impact resistance	IR6	IR4	EN ISO 6272
Adhesion strength	> 3.0 MPa	> 3.0 MPa	EN 13892-8
Hardness	74 - SHORE D	70 - SHORE D	DIN 53505

DUROFLOOR-PU 211 color

RAL 7040 (Window grey)

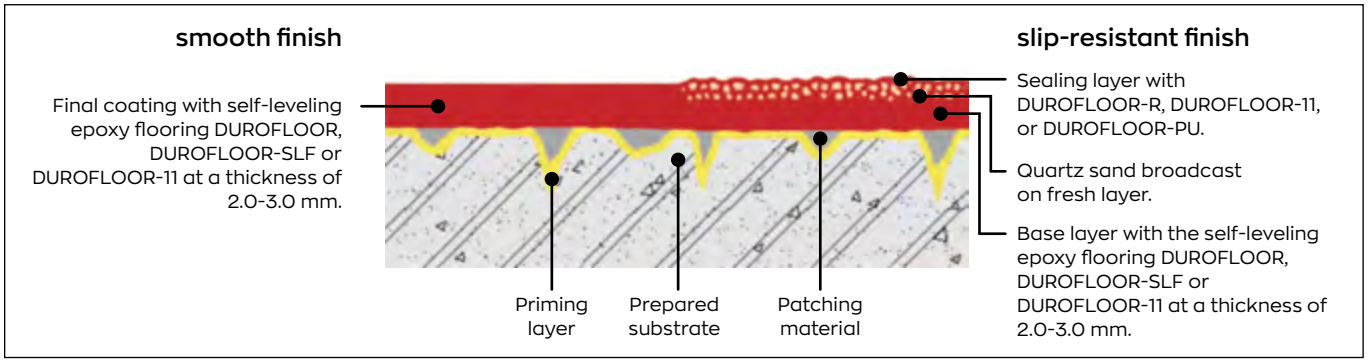
This color is indicative only and may slightly vary from real one.

Slip resistance

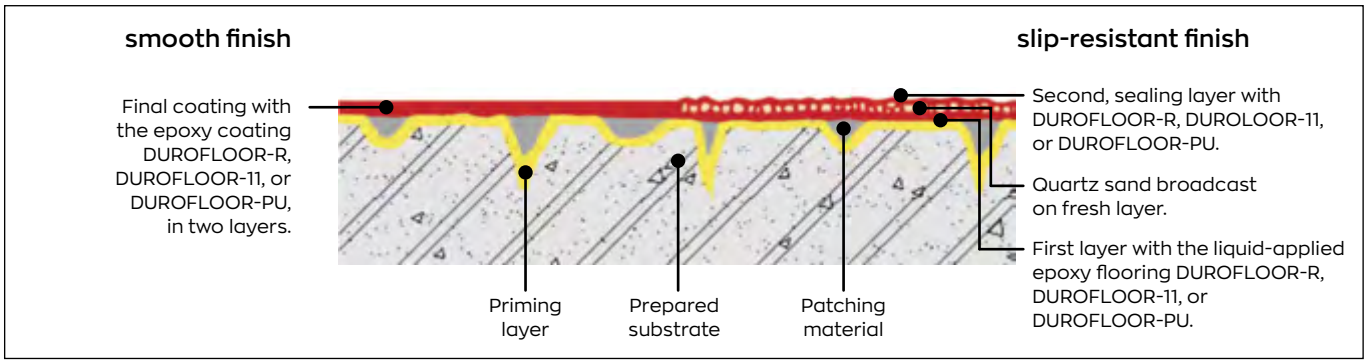
Slip-resistant finish

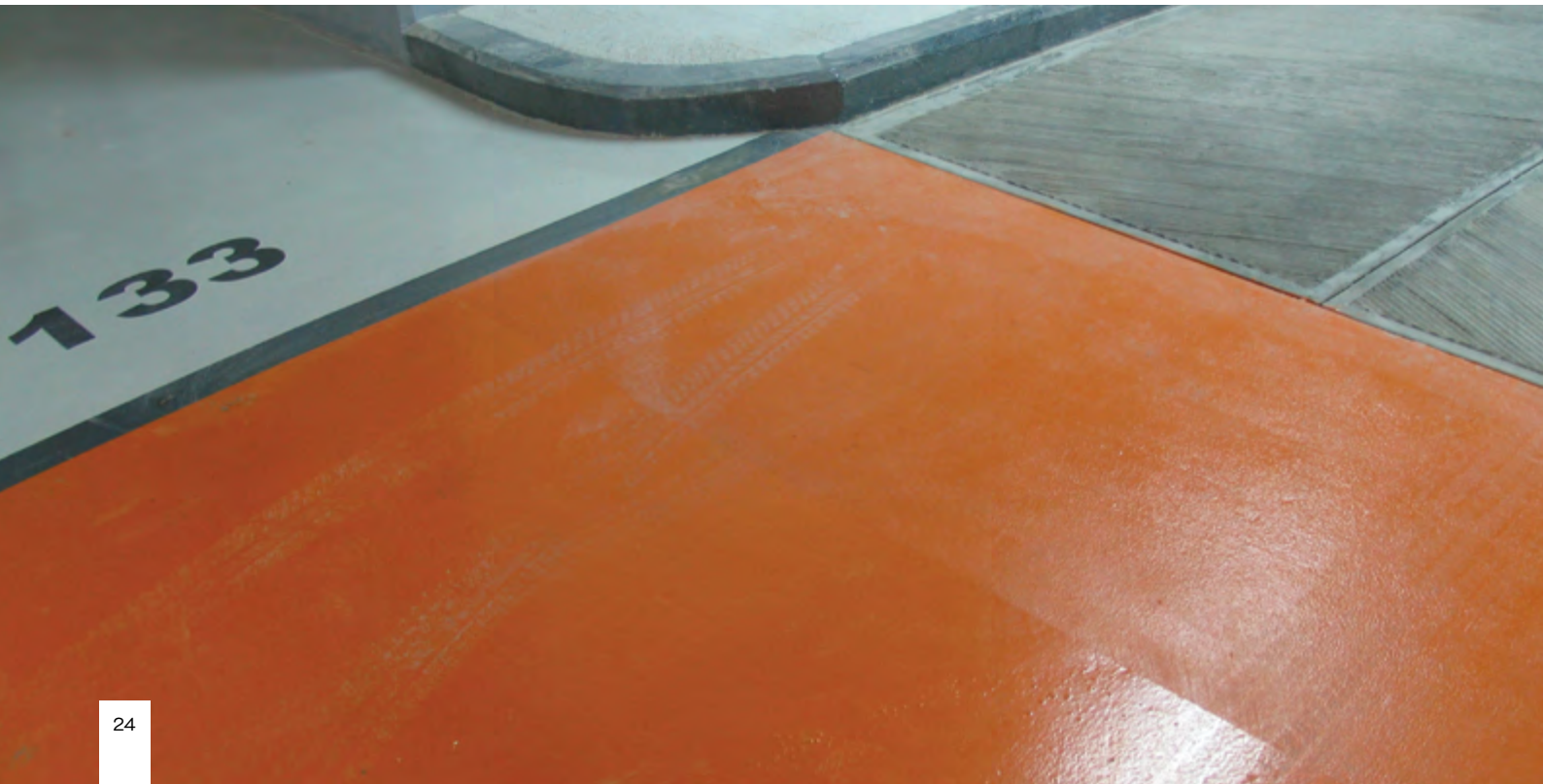
After hardening, resin floorings provide a smooth surface finish of R9 slip resistance, suitable for normal use (see page 23). In applications where there is high risk of slipping (meaning slip resistance needs to be higher than R9), it is possible to form a slip-resistant surface finish. The first layer of the resin flooring is applied and then quartz sand is broadcast to saturation on the still fresh layer. After the layer has hardened, any loose grains are removed with a high-suction vacuum cleaner. Finally, a sealing layer of **DUROFLOOR-R, DUROFLOOR-11**, or **DUROFLOOR-PU** is applied with a roller. The slip resistance level of the floor surface depends on the particle size of the quartz sand that has been used and the broadcast density.

DUROFLOOR, DUROFLOOR-SLF or DUROFLOOR-11 (as self-leveling flooring)



DUROFLOOR-R, DUROFLOOR-11 (as floor coating), or DUROFLOOR-PU





Slip-resistance

Safety, slip risk and hygiene maintenance according to specific site conditions are key factors when choosing the slip resistance level of the floor.

The greater the particle size of the quartz sand, the higher the slip resistance, but the harder it becomes to meet cleaning and hygiene requirements.

Quartz sand broadcast onto the fresh **DUROFLOOR** layer to reach the desired slip resistance in the Athens Concert Hall parking garage, Greece.

Depending on the particle size of the quartz sand to be used, it is possible to have a floor with an R9 rating (smooth finish) reach a higher slip rating (R10, R11 and R12).

The desired level of slip resistance depends both on the particle size of the quartz sand and the broadcast density. The following table shows the consumption of the sealing layer in relation to the desired level of slip resistance.

LEVEL OF SLIP RESISTANCE	INTENDED USE	QUARTZ SAND particle size (mm)	SEALING LAYER consumption (g/m²)
R9 smooth finish	Exhibition halls, shops, hospitals, schools	-	-
R10 low slip resistance	Entrances, stairs, toilets, car parks	0.1 - 0.4 (partial broadcast)	300 - 350
R11 medium slip resistance	Restaurant kitchens, auto repair shops, cold storage rooms	0.1 - 0.4 (full broadcast)	400 - 450
R12 high slip resistance	Food processing sites, washing-up areas in kitchens	0.3 - 0.8 (full broadcast)	450 - 550

Conductive self-leveling epoxy flooring system

DUROFLOOR-C

Two-component, self-leveling, conductive epoxy flooring

DUROFLOOR-C is a two-component, solvent-free, self-leveling colored epoxy system. It offers permanent conductivity that prevents static charge build-up on floors. Its electrical resistance is between 10^4 and 10^6 Ohm*. **DUROFLOOR-C** provides resistance to high traffic and mechanical wear. It is resistant to organic and inorganic acids, alkalis, petroleum products, certain solvents, waste materials and water.

DUROFLOOR-C is used as a pourable, self-leveling coating on cementitious floors to eliminate the risk of spark generation caused by static electricity. Suitable for use in computer rooms, laboratories, print shops, warehouses, textile mills, gas stations, electric distribution stations, ammunition stores, etc.

Consumption: ~ 1.5 kg/m²/mm of layer thickness.

Packaging (A+B): 10 kg in RAL 7040 (window grey).

* These values may vary depending on on-site conditions (temperature, humidity, etc.) and the equipment used to take the readings.

CE
EN 13813
SR-B2,0-
AR0,5-IR4

DUROFLOOR-CV

Two-component, conductive epoxy varnish

DUROFLOOR-CV is a two-component, colored epoxy system with solvents. It offers strong bonding to the substrate and high conductivity that prevents the build-up of static electricity on floor surfaces. Its electrical resistance is lower than 10^4 Ohm. **DUROFLOOR-CV** is used as an intermediate layer, below the epoxy flooring **DUROFLOOR-C**, to generate uniform conductivity over the entire floor surface.

Consumption: ~ 200 g/m².

Packaging (A+B): 8 kg in black.

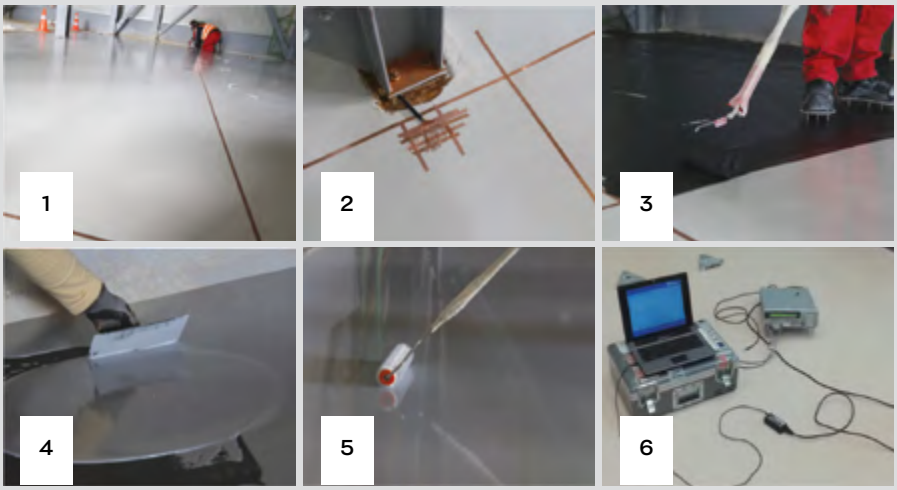
ISOMAT provides also special copper tapes for the preparation of the conductive self-leveling epoxy flooring system.

CE
EN 13813
SR-B2,0

Installation

Components A (resin) and B (hardener) of DUROFLOOR-C and DUROFLOOR-CV are packaged in two separate containers, at a predetermined mixing ratio by weight. Before the application, it is recommended to slightly stir component A for 1 minute until it becomes homogeneous. The whole quantity of component B is added to component A. The two components should be mixed for about 3 minutes with a low-speed mixer (300 rpm).

It is important to thoroughly stir the mixture near the sides and bottom of the container to achieve uniform dispersion of the hardener. To ensure thorough mixing, the mixture is poured into a clean container and mixed again for at least 1 minute until fully homogeneous.



1. After the epoxy primer has hardened, special self-adhesive copper tapes (conductors) should be installed on the floor in a grid formation of approximately 5x5 m, connected with a closing perimetrical cable. **2.** Then, we select an appropriate point of the cable of the grid formation and connect it to the ground. For safety reasons, it is recommended to keep two ground points. **3.** Afterwards, the primed surface is coated with DUROFLOOR-CV, which is applied by roller in one thin layer, in order to cover the copper tapes. Consumption: ~ 200 g/m^2. **4.** DUROFLOOR-C should be laid within 24 hours from the installation of DUROFLOOR-CV, after it has dried. DUROFLOOR-C is spread on the floor with a smooth trowel at a thickness of ~ 1.5-2 mm, at a consumption of ~ 1.5 kg/m^2/mm. **5.** The self-leveling layer should be rolled on with a special spiked roller, which helps to avoid the formation of bubbles by letting the entrapped air escape. The use of spiked shoes during this process is necessary. Thanks to its low viscosity, the mixture is self-leveling, providing a smooth final surface. **6.** After 7 days and when the floor is completely dry, it is recommended to measure again the electrical resistance to confirm that the required level of conductivity has been achieved.

DUROFLOOR-C properties

DUROFLOOR-C color

RAL 7040
(Window grey)

This color is indicative only and may slightly vary from real one.

More colors are available for a minimum order quantity of 150 kg.

For use in multimedia rooms, surgery rooms, print shops, cotton mills, laboratories x-ray rooms, etc.

TECHNICAL DATA

PROPERTIES	DUROFLOOR -C	STANDARD
PHYSICAL		
Density	1.45 kg/l	
Viscosity	~ 5,700 mPa.s	BROOKFIELD
Minimum hardening temperature	+8°C	
Walkability (+23°C)	24 h	
Final strength (+23°C)	7 days	
Electrical resistance	10^4 - 10^6 Ohm	
MECHANICAL		
Wear resistance - BCA	AR0.5	EN 13892-4
Impact resistance	IR4	EN ISO 6272
Adhesion strength	> 3.0 MPa	EN 13892-8
Hardness	80 - SHORE D	DIN 53505
CHEMICAL		
Resistance to chemicals* * For more details, please contact ISOMAT's Technical Support team at support@isomat.eu.		

Tool cleaning

Tools used in epoxy system applications must be thoroughly cleaned with the special solvent **SM-25**, immediately after use. Respectively, tools used in polyurethane system applications must be thoroughly cleaned with the special solvent **SM-28**.

Construction details

Sealing joints

Large-area floors contain both construction and expansion/contraction joints. These joints, after getting properly opened along their entire length with the help of a grinder, should be cleaned and sealed with an elastomeric material that is able to withstand any possible expansion/contraction. The same method also applies for joints around metal frames and grates.

SEALANTS

CE EN 15651-1 F-EXT-INT

GEV-EMICODE EC 1 very low emission

FLEX MS-45 is an elastomeric, solvent-free adhesive and sealant, based on hybrid polymer resins. It provides high elasticity, excellent sealing ability and adhesion to wet substrates. Available in 280 ml cartridges (white, grey and red-brown) and 600 ml sausages (grey).

CE EN 15651-1 F-EXT-INT

FLEX PU-40 is a solvent-free elastomeric adhesive and sealant. It is characterized by good elasticity and high sealing ability. Additionally, it provides excellent adhesion to any kind of substrate. Available in 310 ml cartridges and 600 ml sausages (white, grey and brown).

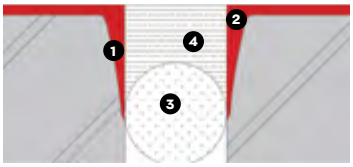
CE EN 15651-1 F-EXT-INT-CC

FLEX PU-30 S is a polyurethane joint sealant with solvents. It provides high elasticity and excellent sealing ability. Available in 310 ml cartridges and 600 ml sausages (white and grey).

CE EN 15651-1 F-EXT-INT-CC

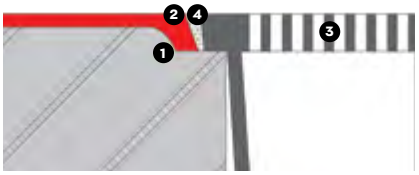
FLEX PU-50 S is a polyurethane adhesive and sealant with solvents. It is characterized by good elasticity and high sealing ability. Additionally, it provides excellent adhesion to any substrate type. Available in 310 ml cartridges and 600 ml sausages (white and grey).

Sealing of a floor expansion joint



1. Widening the sides of the expansion joint with an angle grinder or a circular saw.
2. Filling the widened sides with the same material used for flooring, having first protected the depth of joint (e.g. with polystyrene).
3. Removing the polystyrene and placing a backer rod to control sealant depth.
4. Filling the joint with a suitable sealant.

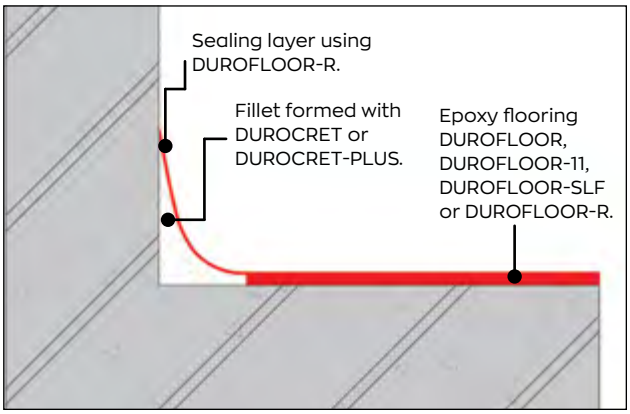
Sealing around a metal manhole cover or grate



1. Grinding around the manhole.
2. Filling the widened sides with the same material used for flooring.
3. Installing the metal manhole cover.
4. Filling the gap with a suitable sealant.

Corner fillet at wall/floor junctions

Where floors meet wall surfaces in hospitals, medical labs, food factories, etc., the floor finish should be curved at the junction to avoid harboring microorganisms, dirt, and grime and allow easy cleaning. A corner fillet can be formed with the use of a polymer-modified cementitious mortar (e.g **DUROCRET** or **DUROCRET-PLUS**). During the laying of the main epoxy coating, the fillet is coated with **DUROFLOOR-R/DUROFLOOR-11** in order to create a uniform, seamless surface with the epoxy flooring.



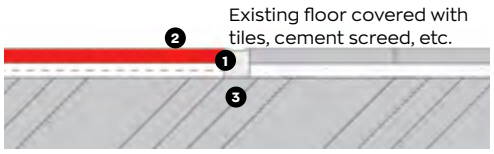
Connection points of epoxy flooring with other overlays

The connection points of the flooring with other overlays like cement screed, tiles, marble, etc. are exposed to heavy mechanical wear. In these cases, the joint should be opened along the flooring sides and sealed with the same material used for coating the floor (**DUROFLOOR, DUROFLOOR-SLF, DUROFLOOR-11** or **DUROFLOOR-R**), which acts as a local reinforcement. The joint is re-cut and filled with a suitable elastomeric sealant.

1. Cutting a triangular joint along the epoxy flooring side.

2. Filling the joint with the same material used for flooring (DUROFLOOR, DUROFLOOR-SLF, DUROFLOOR-11 or DUROFLOOR-R) to locally enhance the flexural strength.

3. Re-cutting the joint and filling with a suitable elastomeric sealant.



Floor surface hardening

The mechanical properties on the surface of cement-based floors (industrial floors, concrete slabs, screeds, terrazzo) can be cost-efficiently improved with the use of the two-component, transparent epoxy impregnation **DUROFLOOR-BI**.

DUROFLOOR-BI

Two-component, transparent epoxy impregnation

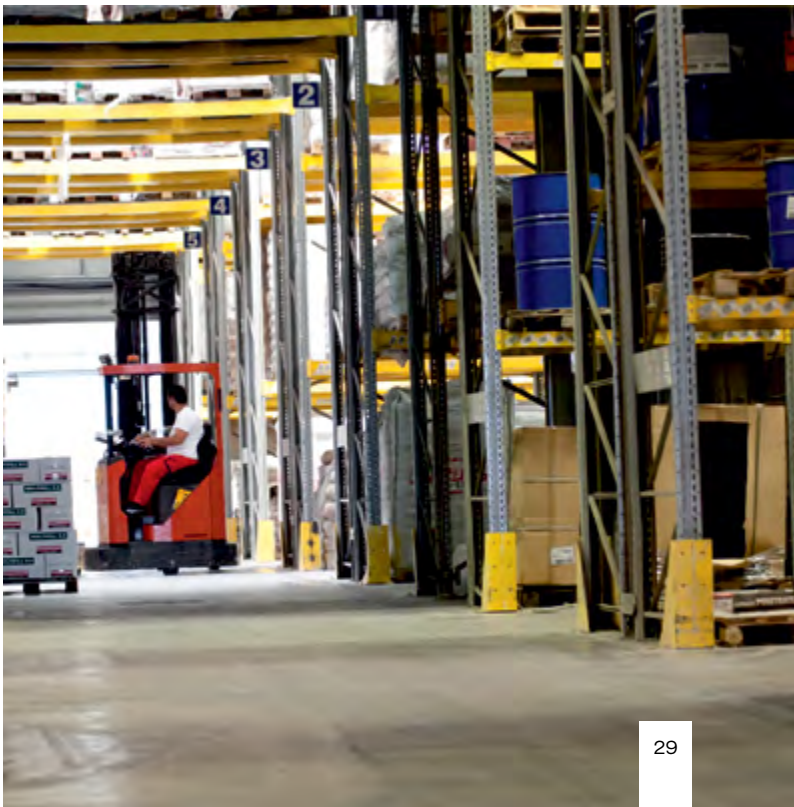
DUROFLOOR-BI is a two-component, transparent epoxy system with solvents for indoor and outdoor application. Thanks to its low viscosity and great fluidity, it can penetrate deep into the substrate by filling pores and capillaries. The impregnated surfaces become sound and durable, and particularly resistant to abrasion, chemicals and frost. Additionally, they show enhanced resistance to waste, mineral oils and petroleum products.

DUROFLOOR-BI is suitable for floors in parking garages, warehouses, laboratories, industries, gas stations, auto repair shops, etc.

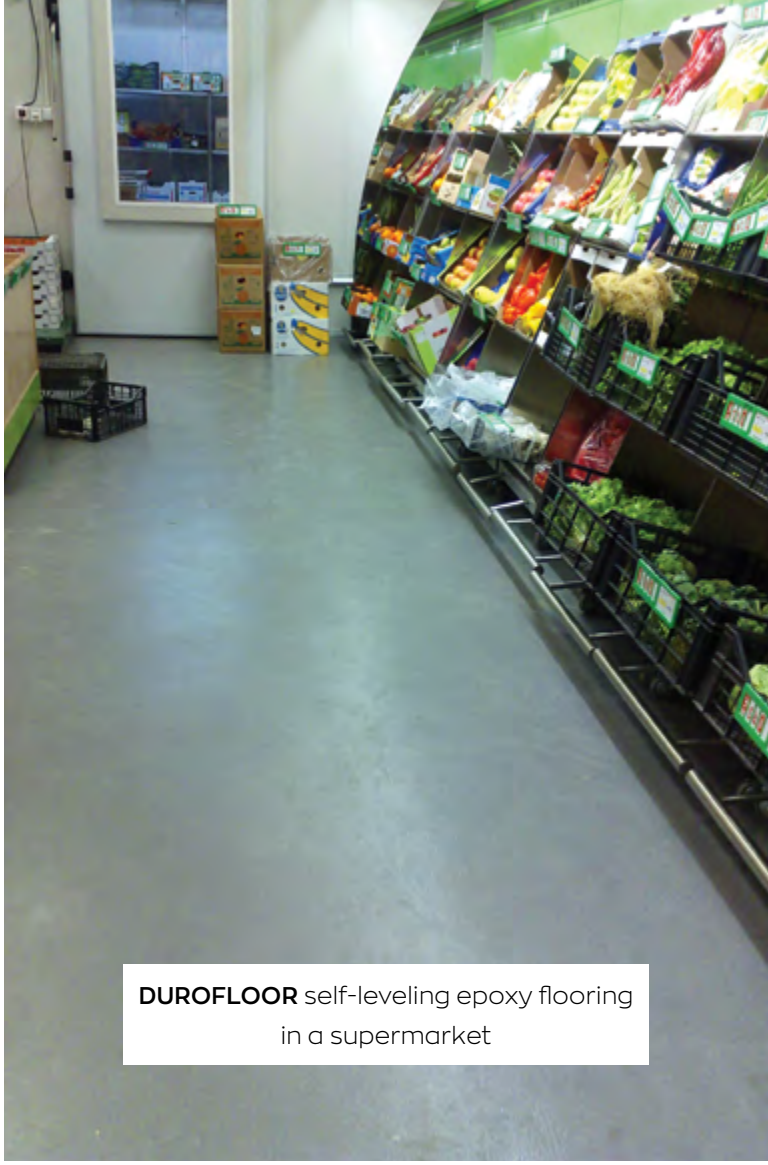
Consumption: 150-250 g/m^2/layer.

Packaging (A+B): 4 kg, 10 kg.

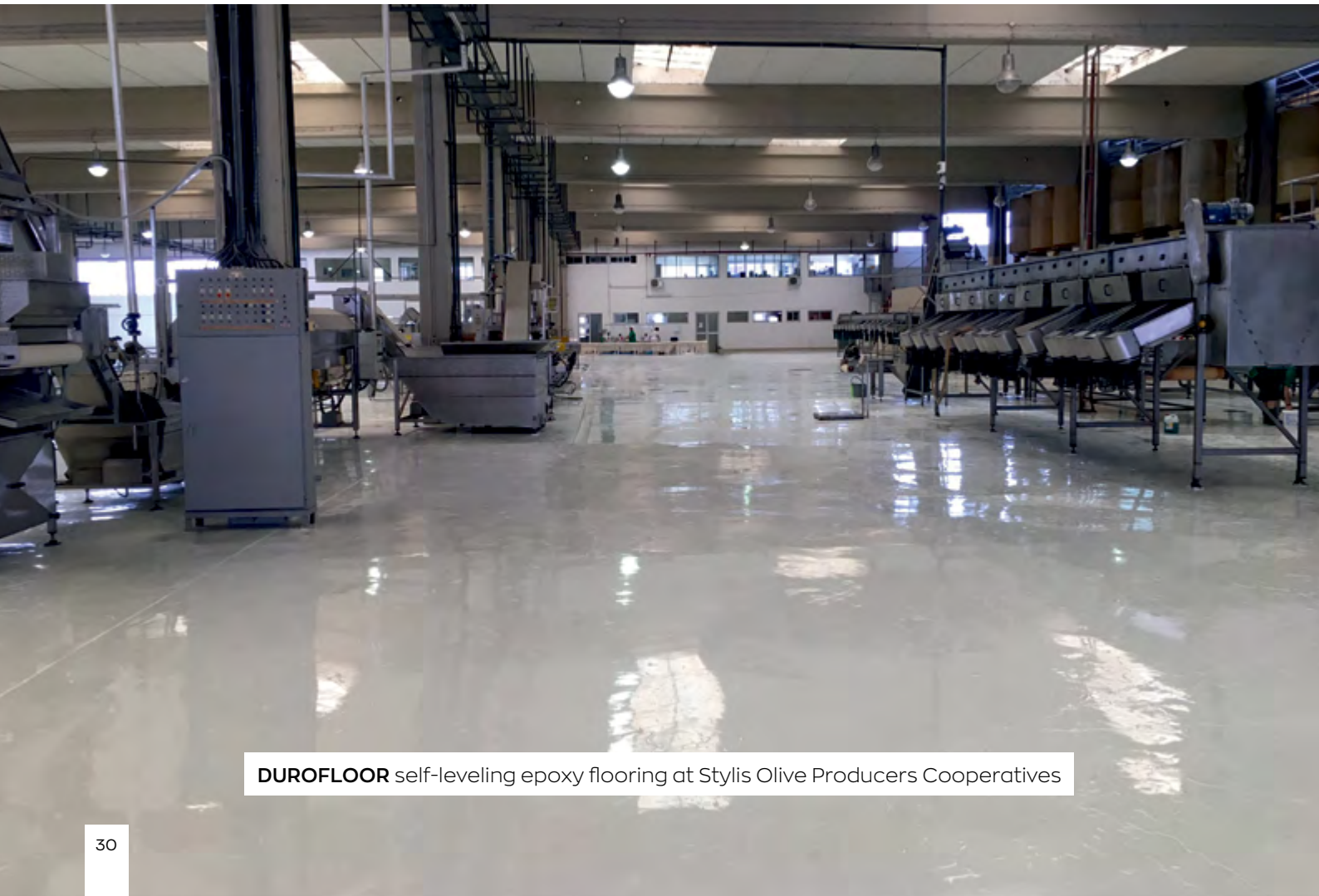
CE
EN 13813
SR-B2,0



Reference Projects



DUROFLOOR self-leveling epoxy flooring in a supermarket



DUROFLOOR self-leveling epoxy flooring at Stylis Olive Producers Cooperatives

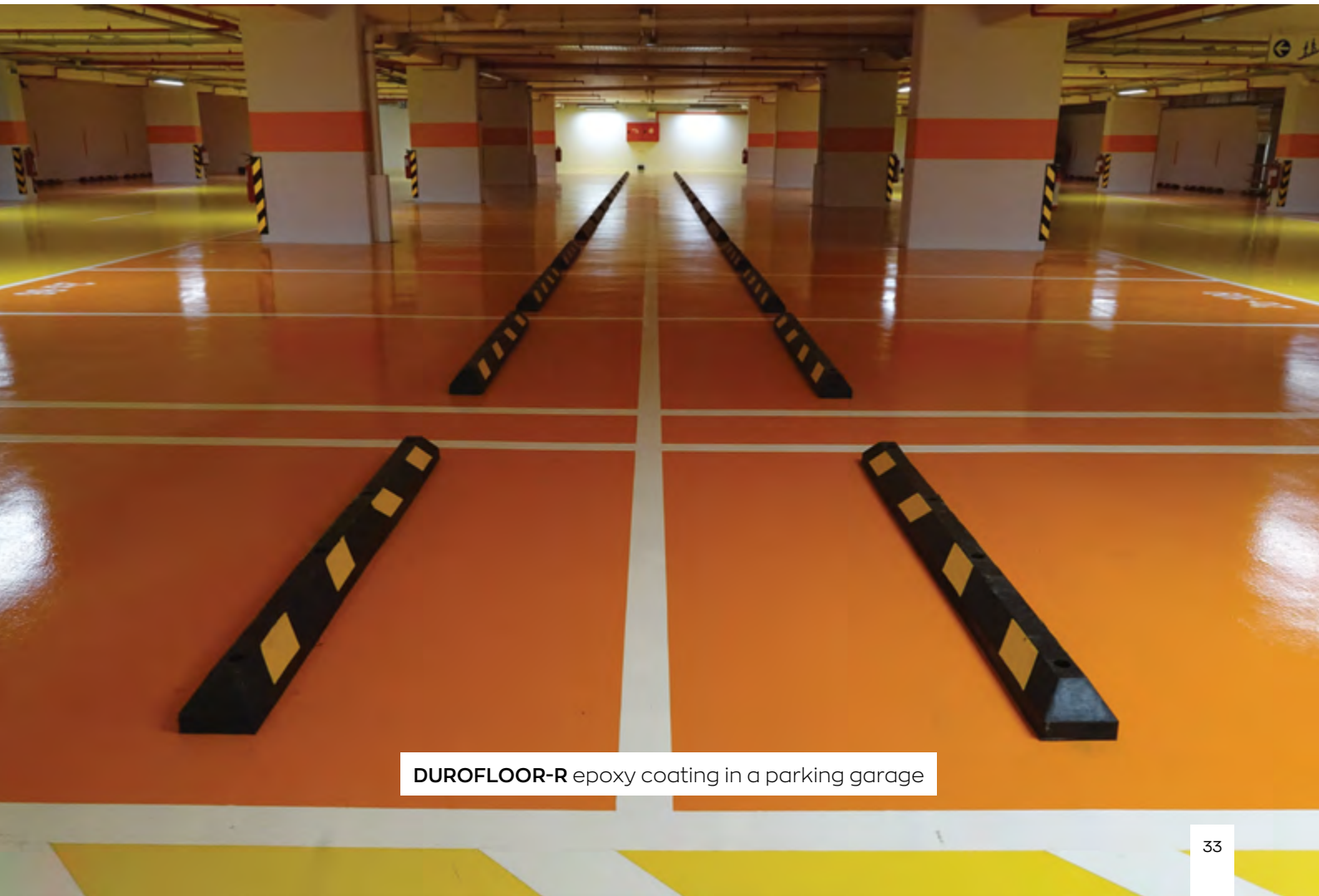
DUROFLOOR self-leveling epoxy flooring in an olive oil production unit

DUROFLOOR self-leveling epoxy flooring in a warehouse

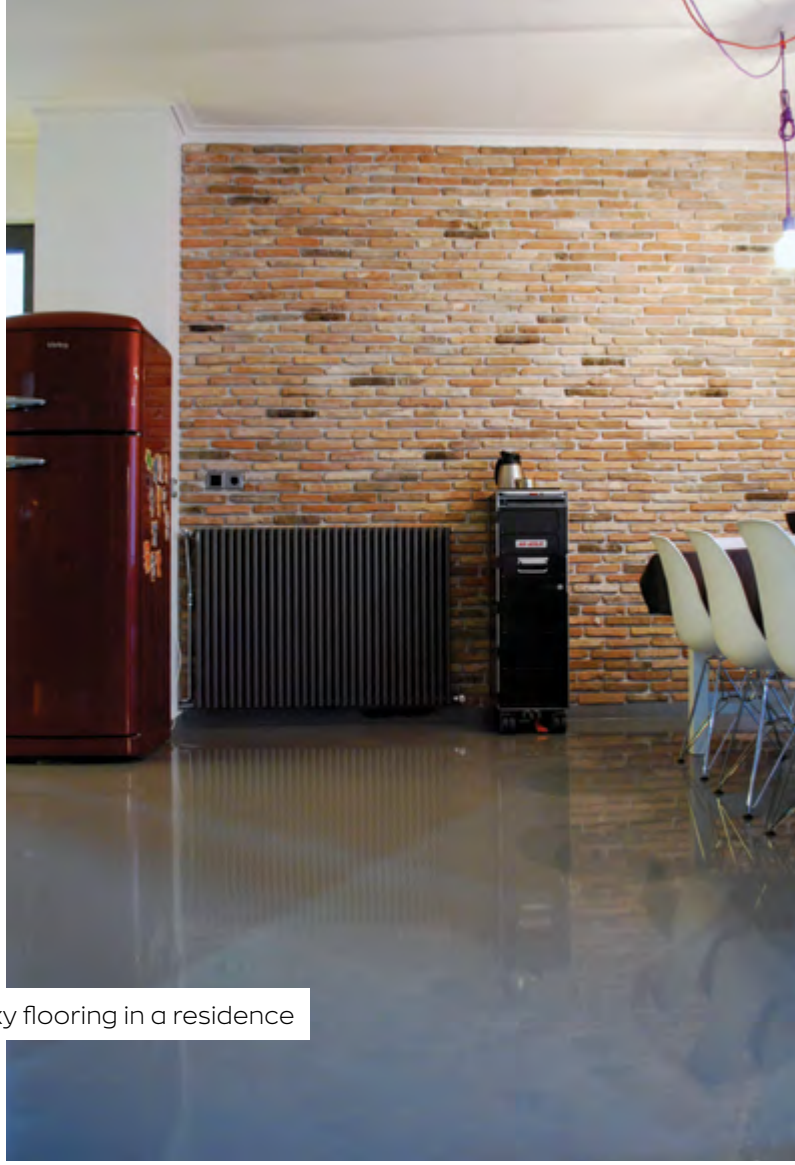
DUROFLOOR-R epoxy coating in a warehouse

DUROFLOOR-R epoxy coating in a warehouse

DUROFLOOR-R epoxy coating in a parking garage



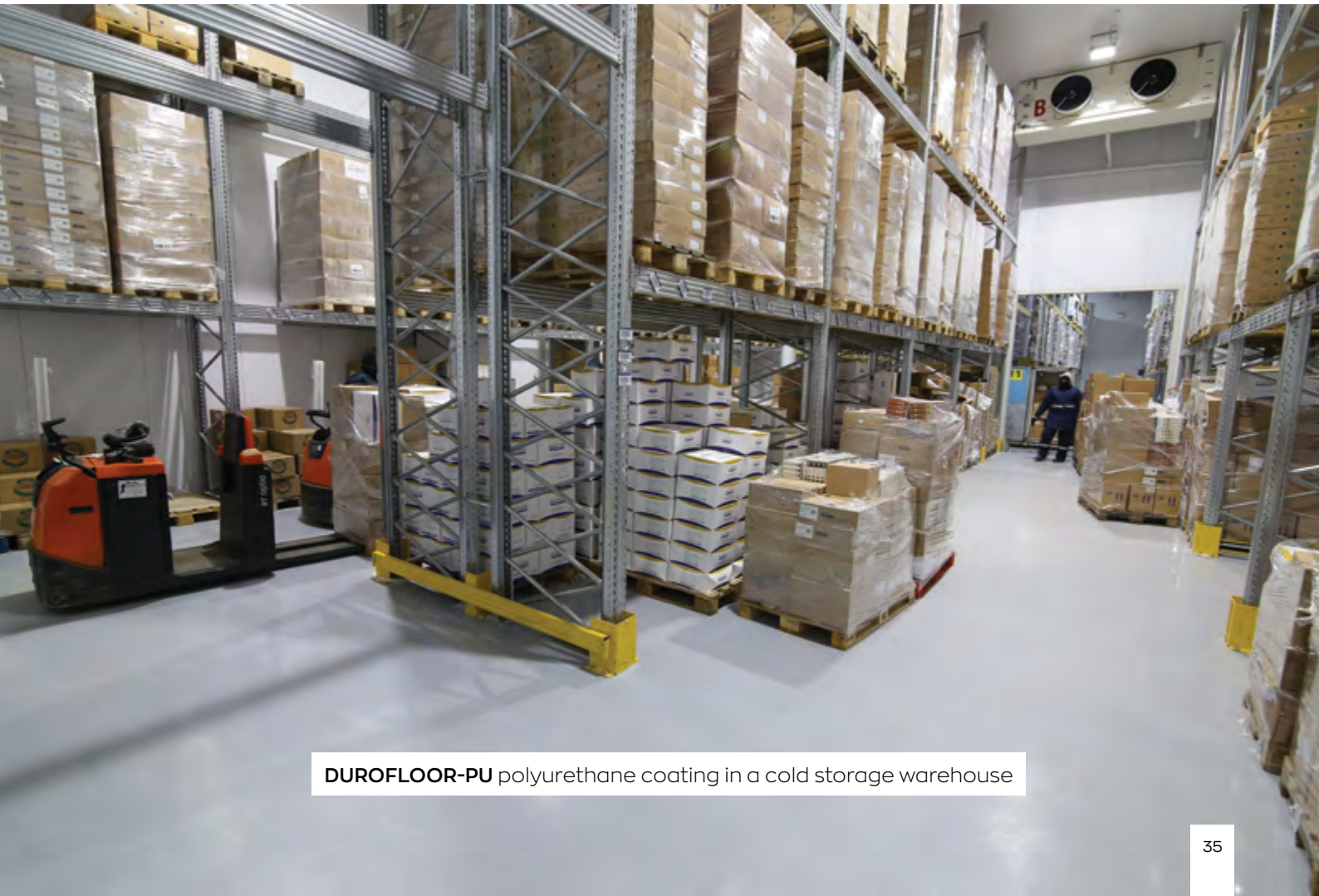
DUROFLOOR-R epoxy coating in a parking garage



DUROFLOOR-PU 11 epoxy flooring in a residence

DUROFLOOR-PSF epoxy flooring in a restaurant

DUROFLOOR-PU polyurethane coating in a winery



DUROFLOOR-PU polyurethane coating in a cold storage warehouse

ISOMAT is a Greek multinational Group specializing in the development and manufacture of building chemicals, mortars and paints. For over 40 years, **ISOMAT** has been making a history of quality, reliability, deep expertise and continuous business growth. **ISOMAT** Group has three production units; one in the parent company in Greece and two in its subsidiaries in Romania and Serbia. In addition, it has 5 commercial subsidiaries in Germany, Russia, Turkey, Bulgaria, and Slovenia and exports to over 80 countries worldwide.

ISOMAT is committed to innovation and the continuous development of new product solutions that enable sustainable construction. By drawing on scientific knowledge, its dedicated R&D team of highly qualified experts in the 7 R&D centers and the 3 Quality Control labs in Greece and abroad have as their mission to optimize existing products and develop every year a great number of pioneering products and best-in-class solution systems in line with the ever-changing market needs and the latest technological developments in the construction industry.

Sustainability is a strategic priority for **ISOMAT** and that is why we have added to our logo the tagline "For a sustainable future", serving as a pledge of our commitment to this cause. With a clear aim to actively play our part towards a more sustainable future, we make sure that the products we develop, the manufacturing process, and the actions in which we participate are environmentally and socially responsible. Our products are produced through optimized processes that minimize negative environmental impact by conserving energy and water while limiting greenhouse gas emissions. Recycling and efficient waste management are also key priorities for us. This is how we significantly reduce our environmental footprint every year. We move forward along the path to sustainability by developing and producing more and more high-quality products that contribute to a healthy living and working environment. These products have been awarded internationally recognized certifications for both their technical characteristics and their friendliness towards applicators, end users, and the environment. Such certifications are EMICODE®, Indoor Air Comfort GOLD, Blue Angel and EU Ecolabel. Staying true to continually reducing our environmental footprint, **ISOMAT** has developed EPDs to improve transparency and carefully monitor the life cycle of its products to ensure compliance with established processes. **ISOMAT** is the first Greek company to have such an extensive EPD portfolio covering a wide range of materials and integrated systems for every construction need. In view of the above, it is clear why **ISOMAT** products are selected as the main materials in major projects pursuing green building certifications such as LEED, BREEAM, etc. Opting for green, certified building materials is a step towards sustainable construction and a more sustainable future for all of us!

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