POLYUREA

HOT- & COLD-APPLIED POLYUREA PRODUCTS

isomat

building quality

for a sustainable future

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INTRODUCTION

POLYUREA coating technology constitutes a superior solution to traditional ones used in waterproofing and protective coating applications. This technology is based on the reaction of an isocyanate component with an amine blend. Its exceptional properties result in rapid completion of works and immediate return-to-service, while making it suitable for a wide range of applications, especially under highly demanding conditions. Polyurea products can be hot-spray applied or cold-applied, the latter being also called polyaspartics, featuring different characteristics and benefits.

Hot spray-applied polyurea is used in a myriad of waterproofing and protection applications, especially those where high mechanical and chemical resistance, fast completion of works, and immediate return-to-service are critical considerations, e.g. industrial, commercial, residential, and infrastructure projects, wastewater treatment facilities, water tanks, the automotive industry, and even the ballistic industry.

ISOMAT hot spray-applied polyurea membranes feature ultra-rapid curing. Gel time is achieved within seconds, allowing for foot traffic after a few minutes and use of the facility in less than one day, significantly reducing downtime. They have impressive chemical resistance and exceptional mechanical properties. Almost no coating can compare to polyurea when it comes to attainable physical properties. Polyurea is hydrolytically stable, so relative humidity or residual moisture have little to no effect on adhesion or coating performance. It also features thermal stability, meaning temperature variations hardly influence coating performance or adhesion ability. Polyurea delivers an easy-to-clean surface, which can also withstand most cleaning processes in industrial projects thanks to its chemical resistance. By offering high resistance to aging and abrasion, ISOMAT polyureas could be a permanent solution for any project, providing they are maintained and cared for properly. Furthermore, polyurea products are solvent-free, consisting of a 100% solids formula with no VOCs. Reducing solvents and VOC emissions is essential in environmentally friendly systems. After curing, polyurea products form a seamless membrane featuring vapor permeability. They are applicable even to vertical and curved surfaces, making them ideal for complex structures and details. They are spray-applied with high-pressure and high-temperature plural-component spray equipment, allowing trained applicators to build up a finished thickness with accuracy in a single pass. Most hot spray-applied polyurea membranes used in construction should not be left exposed to UV radiation. A suitable ISOMAT UV-stable protective coating should be used as a final layer.

Cold-applied polyureas, also known as polyaspartics, are materials intended for use in a wide range of waterproofing and flooring applications, including flat roofs, balconies, patios, walkways and car park decks.

ISOMAT cold-applied polyurea products stand out from the other common waterproofing and flooring solutions for their unique combination of the various benefits they offer to both owners and applicators. Unlike hot spray-applied polyureas, most of them are aliphatic, meaning they remain unaffected by exposure to UV radiation, featuring non-yellowing properties. This is why they can be left as an exposed layer. They also have fast-curing times and allow any application to be completed within one day, providing for next-day return-to-service. They exhibit high mechanical strength and chemical resistance, meaning they are well-suited materials for use in flooring applications. Cold-applied polyureas are usually solvent-free and low-VOC products, making them ideal for indoor applications. They are easily applied through conventional tools used mainly when applying liquid membranes and coatings, namely roller, brush or airless spray.

POLYUREAS

ISOMAT-PUA 2230

Two-component, highly resistant, ultra fast-curing, hot spray-applied, pure polyurea protective membrane

100% pure polyurea obtained from the reaction of an aromatic, isocyanate prepolymer with an amino resin. Shows ultra fast-curing times and is ideal for use as a protective coating on floors subject to heavy vehicular traffic and where high chemical resistance is required.

Packaging: 400 kg (A+B), grey.

Consumption: approx. 1.5-3.0 kg/m^2, depending on the substrate and the application field.

FIELDS OF APPLICATION

- As an elastomeric protective coating on industrial floors in car parks, light to heavy vehicular traffic areas, auto repair shops, truck trailers, water tanks and plumbing installations, wastewater and biological wastewater treatment tanks, settling tanks, swimming pools, aquariums, recreation areas, craft businesses, warehouses, etc.
- As a non-exposed waterproofing membrane on bridges, tunnels, industrial facilities, flat roofs, balconies and terraces.

CE EN 1504-2 C EN 13813 SR-B2,0-AR0,5-IR20

absolute waterproofing | gel time ~ 5 sec | after 15-20 min | after 24 h | < 140 mg (H22/1000/1000) | from -40°C to 110°C | 350±50% elongation

ISOMAT-PUA 1360

Two-component, highly elastic, ultra fast-curing, hot spray-applied, pure polyurea waterproofing membrane

100% pure polyurea obtained from the reaction of an aromatic, isocyanate prepolymer with an amino resin. Shows ultra fast-curing times and is ideal for waterproofing and protecting surfaces subject to vibration or structural movements.

Packaging: 400 kg (A+B), grey.

Consumption: approx. 1.5-3.0 kg/m^2, depending on the substrate and the application field.

FIELDS OF APPLICATION

- As a non-exposed waterproofing layer on flat roofs, balconies and terraces, metal roofs, metal bridges, potable water tanks, wastewater and biological wastewater treatment tanks, settling tanks, swimming pools, aquariums, etc.
- As an elastomeric protective coating on industrial floors in warehouses, recreation areas, craft businesses, car parks and traffic areas, auto repair shops, truck trailers, etc.
- Suitable for industrial refrigerators and areas subject to extremely low temperatures or large temperature variations.
- Suitable for waterproofing and protection of polyurethane foam.

CE EN 1504-2 C EN 13813 SR-B2,0-AR0,5-IR20

Root Resistant — root resistant | suitable for drinking water | Suitable For Food Industry — suitable for food industry | absolute waterproofing | gel time ~ 10 sec | after 15-20 min | after 24 h | < 220 mg (H22/1000/1000) | from -40°C to 110°C | 500±50% elongation

ISOMAT-PUA 1240

Two-component, highly elastic, ultra fast-curing, hot spray-applied, hybrid polyurea waterproofing membrane

Hybrid polyurea obtained from the reaction of an aromatic, isocyanate prepolymer with a blend of amine-polyol resin. Shows ultra fast-curing times and constitutes a cost-effective waterproofing and protective solution.

Packaging: 400 kg (A+B), grey.

Consumption: approx. 1.5-3.0 kg/m^2, depending on the substrate and the application field.

FIELDS OF APPLICATION

- As a non-exposed coating in a large number of waterproofing applications, especially when high mechanical and chemical resistance and fast completion of works are required, including flat roofs, balconies, terraces, inverted and green roofs, metal roofs, metal or concrete bridges, stadiums, arenas, etc.
- Suitable for waterproofing and protection of polyurethane foam.

CE EN 1504-2 C

Root Resistant
root resistant

absolute waterproofing

gel time ~ 15 sec

after 15-20 min

kg
after 24 h

< 300 mg (H22/1000/1000)

from -40°C to 80°C

350±50% elongation

POLYASPARTICS

ISOFLEX-PAS 580

UV-resistant, fast-curing, cold-applied polyurea waterproofing membrane

Two-component, cold-applied polyurea waterproofing membrane. Shows fast-curing times, high mechanical and chemical strength and excellent UV and weather resistance properties.

Packaging: 15 kg (A+B), white.

Consumption: 1.0-2.5 kg/m², depending on substrate and reinforcement type.

CE EN 1504-2 C

absolute waterproofing

quickly rainproof

weather- and UV-resistant

350±50% elongation

FIELDS OF APPLICATION

ISOFLEX-PAS 580 is ideal for waterproofing:

- flat roofs and balconies as an exposed waterproofing membrane
- under tile layers in kitchens, bathrooms, balconies and flat roofs, as long as quartz sand has been broadcast on its last layer
- in open parking deck systems
- under thermal insulation boards on flat roofs
- gypsum and cement boards
- bituminous waterproofing membranes coated with granules
- polyurethane foam
- metal surfaces

If a dark color has been chosen as an exposed layer, it is necessary to protect it with **TOPCOAT-PU 720** or **TOPCOAT-PAS 760** in the same color.

ISOFLEX-PAS 660

UV-stable, fast-curing, cold-applied polyurea waterproofing membrane

Two-component, cold-applied polyurea waterproofing membrane. Shows fast-curing times, high mechanical and chemical strength while being UV-stable with excellent non-yellowing properties.

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

Consumption: 1.0-2.5 kg/m², depending on substrate and reinforcement type.

CE EN 1504-2 C

UV weather-resistant and UV-stable

absolute waterproofing

quickly rainproof

ENERGY SAVING COOL PAINT SOLAR REFLECTIVE PAINT

> 400% elongation

FIELDS OF APPLICATION

ISOFLEX-PAS 660 is ideal for waterproofing:

- flat roofs and balconies as an exposed waterproofing membrane
- under tile layers in kitchens, bathrooms, balconies and flat roofs, as long as quartz sand has been broadcast on its last layer
- in open parking deck systems
- under thermal insulation boards on flat roofs
- gypsum and cement boards
- bituminous waterproofing membranes coated with granules
- polyurethane foam
- metal surfaces

It can also be applied as a protective topcoat over aromatic hot spray-applied polyurea.

POLYASPARTICS

TOPCOAT-PAS 780

Transparent, UV-stable, fast-curing, polyaspartic protective coating

Two-component, solvent-free, low-VOC, aliphatic, polyaspartic protective coating. Provides fast-curing times with high mechanical and chemical strength while featuring excellent UV stability.

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

Consumption: ≥ 250 g/m^2 per layer.

CE EN 1504-2 C

UV

weather-resistant and UV-stable

FIELDS OF APPLICATION

TOPCOAT-PAS 780 is intended for use as a topcoat over interior or exterior flooring systems, such as:

- decorative microcement coatings
- decorative quartz broadcast systems
- decorative flake broadcast systems

Suitable also for use as a protective floor coating in industrial units, warehouses, laboratories, showrooms, garages, etc.

It can also be used as a binder for decorative quartz or flake broadcast systems.

TOPCOAT-PAS 760

UV-stable, fast-curing, polyaspartic protective coating

Two-component, pigmented, elastic, aliphatic, polyaspartic protective coating. It is solvent-free and low-VOC.

Offers high mechanical and chemical strength, excellent UV stability and fast-curing times.

Packaging: 7 kg (A+B), 25 kg (A+B), grey.

Consumption: 250-400 g/m^2 per layer.

FIELDS OF APPLICATION

CE
EN 1504-2
C
EN 13813
SR-B2,0-
AR0,5-IR11

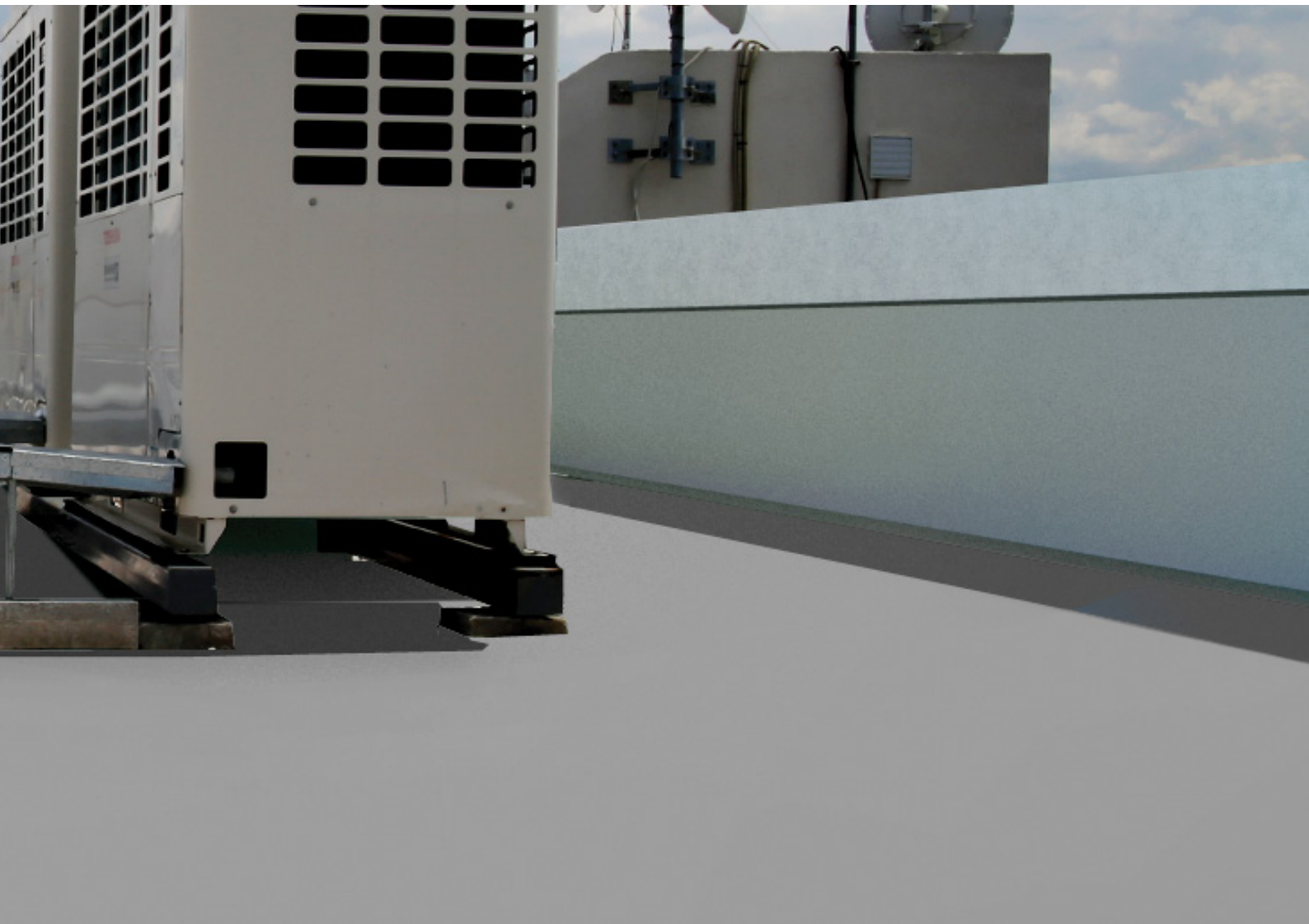
UV
weather-resistant
and UV-stable

TOPCOAT-PAS 760 is intended for use as a topcoat over:

- exposed PU waterproofing layers on flat roofs, balconies, patios, walkways and car park decks, especially when resistance to mechanical loads is required
- exposed epoxy systems
- exposed polyurea systems

Suitable for use as a protective floor coating in industrial facilities, warehouses, garages, interior or exterior decorative flake broadcast systems, etc.

Also well-suited as a protective coating in swimming pools.



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