

DEGADUR® Ready in No Time - To Last a Lifetime

Methacrylic Resins for Industrial Floors and Surface Protection



Experts in Methacrylate Chemistry

Evonik has been manufacturing DEGADUR® reactive resins for decades at its Hanau site, using its own feedstocks (methacrylates). The company distributes these products via an international network of firms specialized in laying industrial and commercial floors.

Methacrylate chemistry is one of Evonik's core activity areas. The specialties based on methacrylates include the PMMA acrylic sheet material known throughout the world by the PLEXIGLAS® trademark.



DEGADUR® methacrylic resins

DEGADUR® for Faster Flooring

Whether the aim is to lay a new floor or renovate an existing one, when selecting and specifying the most suitable type of flooring, architects, planners and contractors must keep an eye not just on functionality, conformity and appearance, but also on the time required for application. That is the only way to ensure a truly tailor-made solution.

Flooring systems manufactured with DEGADUR® synthetic resins from Evonik are not only tough enough to withstand mechanical, thermal and chemical loads, they offer the additional benefit that coating work is rapidly performed and the new floor can be walked over and put to

its customary use just a few hours later. This is the best way to avoid prolonged downtimes or lost sales due to interruptions in routine operations and business.

Resin systems based on DEGADUR® not only cure fast, they also enable processing and curing at temperatures down to minus 30°C.

The balanced property profile of DEGADUR® resins is rounded off by their excellent UV resistance.



Coating systems with DEGADUR® for floors put to various uses



DEGADUR® – Custom-Tailored Systems



Hygiene

Floors, particularly in the food-processing industry (slaughterhouses, restaurants and canteen kitchens etc.), have to comply with food and consumer goods regulations and be approved for the intended purpose in terms of their migration behavior.



Occupational safety

For general safety reasons and to comply with occupational safety standards, floors in work rooms where there is a risk of slipping, especially wet areas, must meet specific requirements for slip resistance.

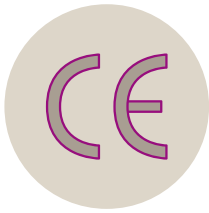
Certified solutions for food-contact areas

DEGADUR® systems have been certified as physiologically safe by ISEGA, Forschungs- und Untersuchungsgesellschaft mbH (ISEGA research and testing institute) in Aschaffenburg, Germany.

Certified solutions for wet areas

DEGADUR® systems are certified by BGIA, the German Institute for Occupational Safety and Health, according to BGR 181 and DIN 51130 for all common slip resistance levels (R9 to R13).





Quality standard

According to the screed material standard DIN EN 13813, synthetic resin floors and coatings must meet wear resistance, impact strength and tensile bond strength requirements in order to receive confirmation of conformity.

Certified solutions for complying with the screed material standard

Floor systems incorporating DEGADUR® are tested by independent institutes. The results comply with the provisions of DIN EN 13813:2002 and meet the requirements for CE marking.



Multi-story car parks

In Germany, coatings in multi-story car parks must meet the requirements of the „Directive on protecting and repairing concrete components“ issued by the Deutscher Ausschuss für Stahlbeton (German Committee for Reinforced Concrete).

Certified solutions for multi-story car parks

An independent German test institute has confirmed that a coating system with DEGADUR® complies with test classes OS 13 and OS 8 under this repair directive. The prerequisite are specifications related to:

- tensile bond strength in the thermal cycling test upon exposure to water
- static crack bridging
- grip and wear resistance
- impact strength



DEGADUR® – Custom-Tailored Systems

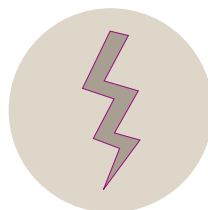


Ship decks

Germanischer Lloyd AG in Hamburg only approves products for deck coatings on ships if they meet the stringent requirements and withstand the heavy loads on ships, such as adhesion to dimensionally unstable metal substrates, salt water resistance, slip resistance etc.

Certified solutions for ship decks

Several DEGADUR® systems comply with the Germanischer Lloyd directive „Rules for Classification and Construction VI-Part 9, Chapter 6, Guideline for Corrosion, Protection and Coating Systems, Section 4, C. 3 - 5 Deck Covings.“



Electrostatic properties

Static charging must be avoided in many areas in order to

- protect people from unpleasant electric shocks
- avoid destruction of electronic components
- prevent possible explosions of flammable air mixtures

Certified solutions for electrostatic conductive floors

According to the certificate from TÜV, Technische Überwachung Hessen GmbH (Technical Inspection Agency), the DEGADUR® 580 seal coat is electrostatic conductive and therefore recommended for rooms in the pharmaceutical, electrical and chemical industries.



Typical Features of DEGADUR®



Rapid curing

DEGADUR® coatings can be exposed to chemical and mechanical loads about two hours after application.

Advantages:

- only short downtimes
- no need to drive to the application site more than once



Curing at low temperatures

Coating systems with DEGADUR® cure completely even at temperatures as low as minus 30°C.

Advantages:

- possibility of coating under unfavorable climatic conditions
- cold-storage rooms

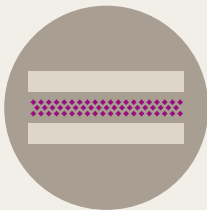


Resistance to weathering and aging

DEGADUR® resins mainly consist of methacrylates. Once these have cured, they form plastics with extraordinary resistance to light and UV radiation, with a long service life.

Advantages:

- long service life
- can also be applied to outdoor surfaces



Inter-layer adhesion

A typical feature of methacrylic resins like DEGADUR® is that the individual layers form particularly good bonds with each other.

Advantages:

- individual layers can be optionally applied at short intervals or later on
- easy to repair



Secure source of supply due to backward integration

Evonik manufactures over 95% of the constituents of DEGADUR® resins itself (monomers, polymers, additives).

Advantages:

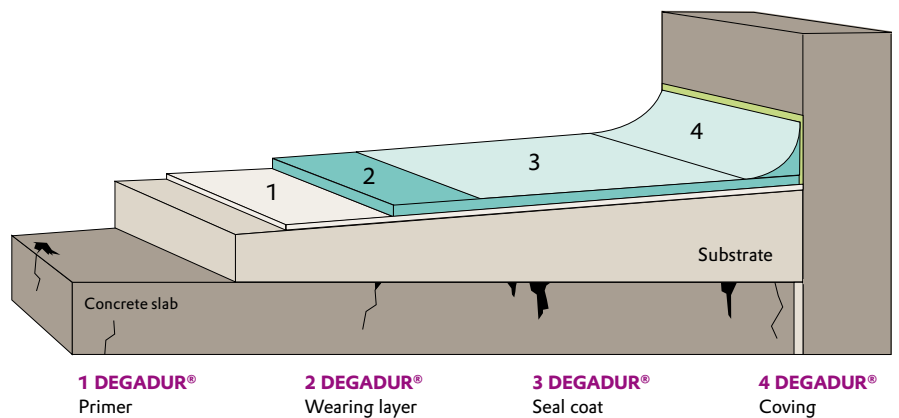
- reliable deliveries of constant-quality feedstocks
- secure source of supply for our DEGADUR® customers

DEGADUR® – Four Steps to Success

Typical coating composition:

- primer
- wearing layer
- seal coat
- coving (optional)

The rapid curing means these layers can be applied without long interruptions or waits. Large projects in particular (up to about 800 m²) can therefore be completed without having to drive to the site several times.



1 DEGADUR®
Primer

2 DEGADUR®
Wearing layer

3 DEGADUR®
Seal coat

4 DEGADUR®
Coving

Preparation



Remove all traces of old coatings.

Priming



Apply primer to the clean, dry substrate using a squeegee and roller.

Wearing layer



Apply the coating in the required layer thickness.

Seal coat



Apply the seal coat using a squeegee and roller.

Broadcast the coating with quartz sand before it has completely cured.

DEGADUR® Coatings - Who Makes and Lays Them?

As the manufacturer of DEGADUR®, Evonik is specialized in developing and producing high-quality methacrylic resins. Our portfolio comprises a range of specific resins that are used to formulate rapidly curing flooring systems.

The coating work, from preparing the floor and formulating the resins with aggregates to applying the primer and subsequent layers, is performed by companies specialized in flooring technology.

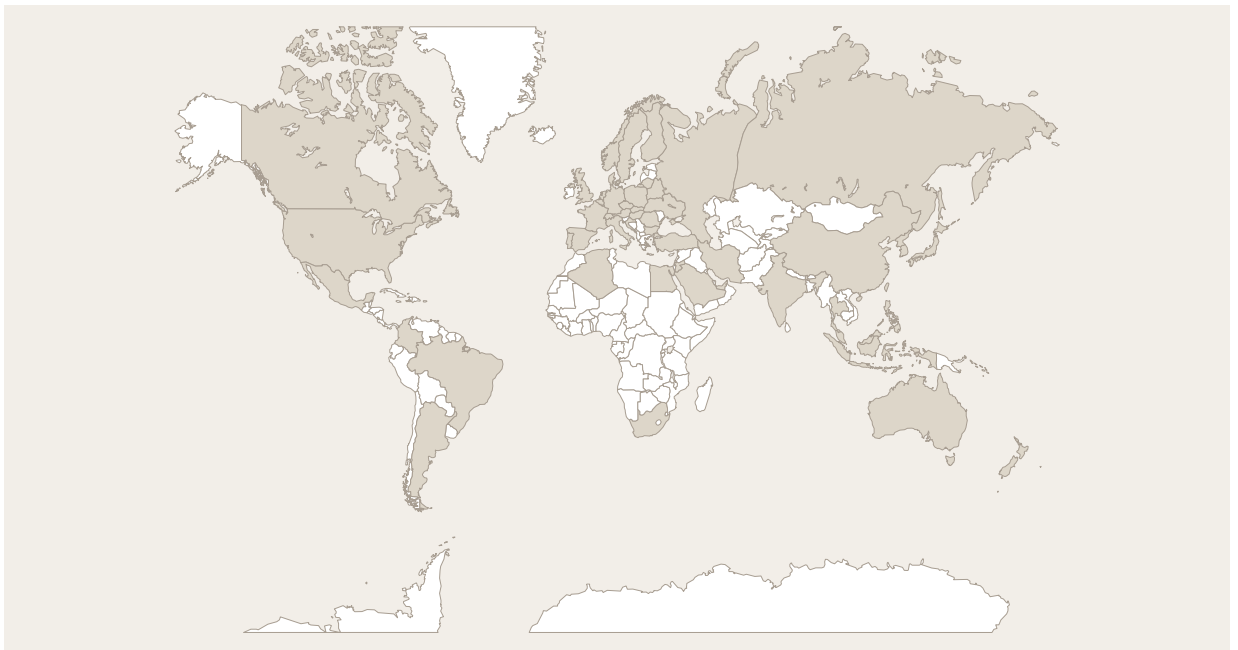
Apart from the choice of the right material, expertise, skilled craftsmanship and careful application are the crucial factors for a professional synthetic resin coating that meets the most stringent quality requirements. That is why Evonik cooperates only with professional companies that

have comprehensive knowledge and specific expertise in using, formulating and applying the DEGADUR® resins. Our application technology department maintains regular contact with our partners, advises them on specific problems and conducts regular training courses for them.

Our network of partners for DEGADUR® resin coatings extends across all continents. On request, we will be pleased to name the nearest specialized company to handle your DEGADUR® flooring project.



Projects on All Continents



DEGADUR®

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Methacrylic resins for industrial floors and surface protection



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® = registered trademark



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