



The ideal solution for any area of application

nora® rubber floor coverings for
industry and trade

nora®

All About Flooring. **All About You.**





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nora® floor coverings made of rubber**

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nora® solutions by specialists – the suitable floor covering for any area of application

nora systems GmbH has been manufacturing floor coverings, steptreads and accessories made of rubber for more than 60 years. With a market share of 80% in Germany and 50% worldwide, we are the market leader in rubber floor coverings. One of our key applications is industry with its multifaceted demands on design and function. The advantages offered by the rubber material are of particular benefit in this area. They are the perfect combination of design and practicality.

nora® floor coverings offer you the potential to implement integral design concepts with different functional properties in the entire area. You can choose from more than 300 different types of colours, designs and surfaces in the standard range. The nora® floor coverings are supplemented by a comprehensive range of profiles, steptreads and accessories which together with the technical special floor coverings facilitate a uniform design of different functional areas in your project.

With nora® everything has considered – functionality, durability, and versatility:

- The extraordinary **wear resistance** and **durability** makes the product ideal for use in areas with a high static and dynamic pressure load, e.g. by material-handling vehicles.
- Antistatic, conductive and dissipative grades for the special **demands of areas subject to electrostatic discharges** (EPA)
- **Functional floor coverings** for various demands such as floor coverings largely **resistant to oils, greases** and **chemicals** for production and research areas
- Suitable for areas with high hygienic demands; **dirt-repellent** and **resistant to disinfectants**
- Certified qualification for **GMP areas** and **clean rooms**
- The permanently resilient floor covering properties guarantee high **walking and standing comfort** and thus contribute to improved **workplace ergonomics**
- Excellent **fire protection properties**; flame-retardant and fire-toxicologically safe
- Increase of **slip resistance** from R9 to R11 classification according to DIN 51 130
- Excellent **footfall sound properties** through insulation values of up to 20 dB



**The classic norament® 925:
resisting highest loads
for decades**



**For future generations:
Acting sustainably is
an element of nora systems'
philosophy**

We advocate sustainability and a future worth living for

Preserving or even improving the present living and environmental conditions – this means sustainability. For nora systems, sustainability and corporate responsibility (Corporate Social Responsibility / CSR) are important aspects of the corporate culture and corporate values. It is our declared goal to meet this responsibility in as many areas of our corporate activities as possible. Sustainable housekeeping, environmental protection and social commitment are decisive factors in our daily decision-making.

Responsible dealing with natural resources

The commitment for sustainability and CSR continues the decade-long commitment of nora in environmental protection. Environmental protection continues to be an important element of today's integral concept. nora systems does not only want to give the interior, where nora® floor coverings are used, a creative touch but also wants to reduce the ecological footprint, i.e. save the resources. The development of environmentally compatible products and an environmentally friendly production are thus given priority. The advantages of nora® are obvious:

nora® rubber floor coverings

- do not contain any PVC, plasticizers (phthalates) or halogens (e.g. chlorine)
- are tested for their safety in use
- are regularly monitored by independent institutes
- are installed with eco-compatible accessories such as solvent-free dispersion adhesives
- are low in emissions
- are recognised by acknowledged institutes and associations for their environmental compatibility

High quality for a long life

Thanks to their high quality, nora® rubber floor coverings are extremely resistant to abrasion and wear. Even after decades of use in highly frequented areas, nora® floor coverings still look like almost new. This extraordinary long period of use saves the resources of our earth and contributes to a long-term preservation of the real properties' value.

nora® rubber floor coverings are "made in Germany". They are manufactured on state-of-the-art production lines which are subject to strict ecological requirements and designed to minimise resources.

nora systems is certified according to international standards such as ISO 9001 (quality management) and ISO 14001 (environmental management systems).

Multiple award winner

with the highest commitment

The Blue Angel, The BRE assessment, the EMAS ecolabel, the award of the SGS Institut Fresenius, the LEED certification, the ecolabels of the Greenbuilding Council, the Greenguard ecolabel for "Indoor Air Quality" and numerous other ecolabels and awards, which we received in many countries, are proof that we take our responsibility for the environment and society very seriously.

Commitment in associations

Sustainable buildings are environmentally compatible, economic, efficient and resource-saving. nora systems is actively committed to environmentally compatible living and is a founding member of the German Association for Sustainable Building (DGNB). The objective of DGNB is to show ways and solutions for sustainable building in Germany.

nora systems is also an active actor in the U.S. Green Building Council. The USGBC is the most important association of leading representatives of the construction industry to promote environmentally compatible and profitable buildings which offer healthy premises for living and working. The USGBC established the globally known LEED system and thus created an international standard for the classification of environmentally compatible buildings. We are also a member of the UK GBC.





nora[®] saves time – and a lot of money

When selecting the floor coverings, long-term costs become increasingly more important. The acquisition costs for a floor covering only account for approximately 10% of the entire costs. 90% of the costs account for care and maintenance during the entire life time.

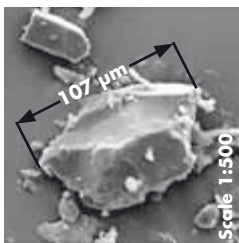
nora[®] – easy to clean

nora[®] rubber floor coverings have a dense, closed surface from the start which is provided by «nora cleanguard[®]»; a factory post-curing of the rubber surface on the basis of innovative formulations and state-of-the-art production technology. This combination ensures that nora[®] floor coverings are easy to clean and represent the most economic decision in the long run.*)

No coating during the entire period of use

Unlike other types of floor coverings, nora[®] rubber floor coverings do not require any additional coatings or paints. Thus, they eliminate unsightly pathways which would be the result of use-related abrasion nor increased contamination, chipping, scratches or discolourations of the coating.

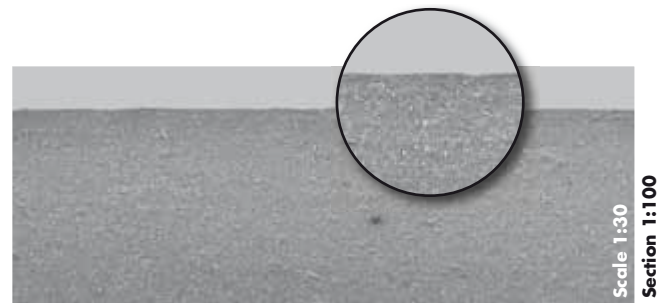
Time-, labour- and cost-intensive basic cleanings can be avoided without the related serious organisational interruptions because of long drying periods (8 – 12 hours). There are no disposal problems concerning the cleaning water and expensive re-coatings are unnecessary.



Dirt particles such as sand grains may easily damage PVC and linoleum surfaces

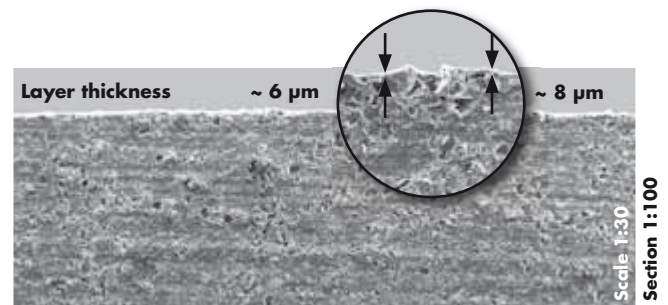
The scanning electron microscope (SEM) shows the difference:

nora[®] – rubber through and through – without wearing layer

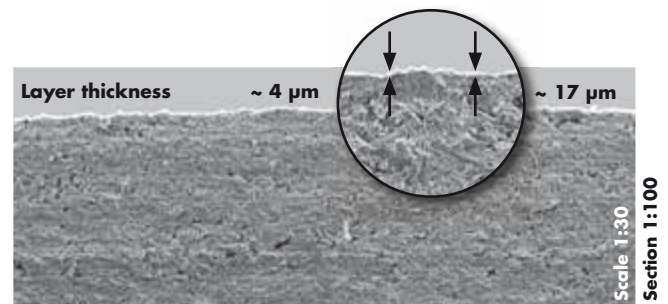


Cross-section noraplan[®] (without coating)

PU surfaces only have a thickness of a few micrometres ($1 \mu\text{m} = \frac{1}{1000} \text{mm}$) and a limited life.



Cross-section PVC with PU surface

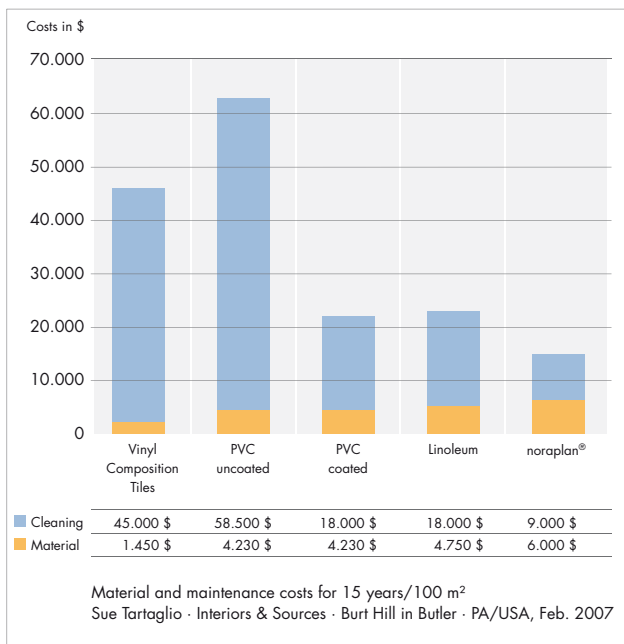


Cross-section linoleum with PU surface

Huge saving potential

Neutral, independent expert opinions confirm the cost-effective factors and the huge saving potential when nora® rubber floor coverings are used. Please request our detailed brochure on the economy of nora® floor coverings.

Economic efficiency comparison: Life Cycle Costs



Production • Assembly • Workshop

Sophisticated production methods require an environment which meets the highest technical standards. The extremely resistant norament® rubber floor coverings combine an extraordinary wear resistance and an extensive resistance to oils and greases as well as a high walking and standing comfort – the perfect solution for demanding production areas!

Simply call us, we would be glad to be of assistance to you!

**Hard wearing: norament®
floorings ideal for use in heavy duty areas.**



norament® 926



norament® 928 grano ed



Photograph: BMW AG
Photographer: Martin Klindtworth
norament® 925





Warehouse • Distribution

Cut out for fork lift trucks

Thanks to their extremely dense, closed surface, nora® rubber floor coverings are extraordinarily durable and wear-resistant. The resulting long life is considerably above the average of other resilient floor coverings. A further example of the cost effective properties of nora® rubber floor coverings

Dynamic pressure load-bearing capability

Depending on a suitable subfloor layout, nora® floor coverings withstand a dynamic pressure load of up to 6 N/mm².

We would be pleased to calculate the dynamic pressure load for you and recommend the suitable floor covering for your specific application.



norament® 926 grano



norament® 926

**An optimal cost/benefit ratio:
Durability without extensive cleaning,
joint-sealing or coating**

ESD protected area



ESD protection made by nora systems

nora® rubber floor coverings are antistatic. Conductive and dissipative special grades also protect against even the smallest uncontrolled discharges. Damages of electronic component parts, malfunctions of electronic devices, incorrect readings at measuring instruments and explosions caused by ESD can thus be prevented.



Electrostatic conductivity

nora® "ec" floor coverings convince by their extremely low tendency to charge of <10 V and the low resistance to ground at $<10^6$ Ohm. They thus serve the optimal ESD protection of electronic component parts and devices and are primarily installed in explosive areas.



Electrostatic dissipation capability

Dissipative nora® "ed" floor coverings fulfil two functions: thanks to the resistance to ground of $10^6 - 9 \times 10^7$ Ohm, they dissipate occurring electrostatic charges sufficiently quickly to protect electronic component parts and devices. But they also meet the insulation resistance of $\geq 5 \times 10^4$ Ohm required by DIN VDE 0100-600 and thus offer sufficient protection to people.

Insulating nora® floor coverings

Apart from the conductive and dissipative floor coverings, nora systems also offers insulating floor coverings; which offer a high resistance of $>10^{10}$ Ohm to prevent the dissipation of electrostatic charges. Because of the dielectric strength of up to 50 kV, these floor coverings are often used in high-voltage areas.





norament® 927 grano ec



norament® 926 grano



norament® 928 grano ed

Research • Laboratory • QA

Be it chemical resistance, electrostatic conductivity or dissipation capability, highest demands on hygiene or ergonomic workplaces – the demands on floor coverings in laboratories are very high.

nora® rubber floor coverings are complemented by a comprehensive accessories range and offer suitable solutions for all requirements. This system also forms the basis of the technical options. The range of nora® floor coverings is thus reasonably supplemented by high-quality accessories for processing and application.

Skirtings and skirting angles guarantee smooth and clean edges. With a special cushion-edged profile, wall coverings can be easily accomplished. Margin and angle guards protect wall corners and transport means against damage.



**Developed, tested and approved for:
nora® floor coverings for laboratories**



nora® rubber floor coverings are largely resistant to chemicals. The short-time exposure to solvents, diluted acids or alkalis does not leave behind any traces.

They are also resistant to surface disinfectants listed in the disinfection lists of VAH (list of the disinfectant commission of the Association for Applied Hygiene) and RKI (German Robert-Koch Institute). In addition, some grades can also be decontaminated.

Simply call us, we would be glad to be of assistance to you!

Media		Colour changes when exposed for 30 min.	Colour changes when exposed for 2 hrs.
Acetone		–	–
Acetic acid	20 %	–	–
Ammonium hydroxide solution	25 %	–	–
Benzene		–	–
Caustic potash	25 %	slight browning	slight browning
Caustic soda	50 %	–	slight browning possible
Citric acid	30 %	–	–
Diethyl ether		–	–
Ethanol		–	–
Formalin solution	5 %	–	–
Hydrochloric acid*	10 %	–	–
Hydrogen peroxide	30 %	–	–
Isopropanol/isopropyl alcohol		–	–
Lactic acid	90 %	–	–
Mineral oil*		–	–
Nitric acid*	10 %	–	–
Phenole solution	10 %	–	–
Phosphoric acid	10 %	–	–
Sodium carbonate solution*	20 %	–	–
Sodium hypochlorite solution	10 %	–	–
Spirits of turpentine*		–	–
Sulphuric acid*	10 %	–	–

Clean room

In many industries, production without the use of clean room technology is no longer feasible. The demands on the materials used in clean rooms are constantly increasing.

The comprehensive nora® portfolio also offers the suitable solution for these sensitive areas.

nora® rubber floor coverings, such as noraplan® mega ed, have an extremely, dense surface and are characterised by their high wear resistance, i.e. by their low material abrasion. They are approved for clean rooms of the air purity category 3 according to DIN EN ISO 14644-1 or GMP purity category A according to the EU GMP guideline.



The lifelong resilience with its high walking and standing comfort contributes to improving the workplace ergonomics. nora® floor coverings protect joints and the back – a factor which will increase in importance through growing awareness and concern for ergonomically designed workplaces, also in laboratories and clean rooms.



noraplan® mega ed, formulation 948 vs. PA6 roll

Force	Air purity category	EU GMP category
100 N	ISO Category 3	GMP Purity category A
200 N	ISO Category 3	GMP Purity category A



noraplan® astro ec



noraplan® ed special design

Reception • Showroom

Reception areas are the hallmark of any company. It is particularly in these areas as well as in showrooms that layout and design play an important role.

The comprehensive nora® portfolio offers unlimited options for an individual design. In our inlay centre, inlays such as company logos, can also be produced to your specifications.

Be influenced by the many design options of nora® rubber floor coverings.



noraplan® special design



norament® 926 serra



norament® 926 strada

**Unlimited options:
with a huge choice and
great design freedom
for an individual design**



Office • EDP • Conference room

With numerous colours and designs, extraordinary room concepts for offices and conference rooms can be implemented with nora® rubber floor coverings. noraplan® acoustic floor coverings provide a footfall sound absorption improvement of up to 20 dB which guarantees excellent acoustics.

The extremely dense surface of the nora® floor coverings also supports from the health and hygienic point of view. Unlike textile floor coverings, they pose no breeding ground for allergy-inducing substances (e.g. house dust mites); and spilled liquids can be quickly and completely removed.

The demands for flexible office, service and warehouse areas are best met by a raised-access floor design. Decisive factors for the advantages of raised-access floors are the functionality and the quality of the top floor. In this respect, the system of the nora® floor coverings sets standards:

- Tile size matched to the grid size 600 mm x 600 mm of raised-access floors
- Conductive and non-conductive floor coverings of identical colours and designs for uniform room concepts throughout
- All nora® floor coverings are antistatic
- Coatings are not required – cleaning is possible by wet cleaning such as spray cleaners or wet mopping





norament® 926 serra



norament® 926 strada





Corridors • Stairwells

Design, safety and comfort – nora® floor coverings have to a lot to offer even in stairwells.

norament® steptreads combine functionality and excellent design options. They provide easy handling and a high level of economy. Stair nosings, treads and risers are preformed from one piece and facilitate a quick, clean installation – a trend-setting solution for renovation and new buildings.

If requested, noticeable safety strips can be integrated into stair nosings and steptreads or nora® floor coverings can be combined with the comprehensive **stair accessories** to create individual stair and corridor designs.

For application areas with critical regard to fire-safety, nora systems also offers very flame-retardant, low-smoke special floor coverings and steptreads. These floor coverings and steptreads are also very **UV-resistant** and thus also suitable for areas with large window façades and heavily subjected to UV light.



norament® 926



norament® stairtreads

Canteen • Day rooms

Canteens are more than mere break and day rooms for your own employees. Guests and customers are increasingly entertained in these areas; designs and colours must be smartly combined with technical requirements such as slip resistance and resistance to oils and greases.

Despite statutory regulations and bans on smoking, the **resistance to cigarette burns** should not be disregarded when selecting the floor covering. While other floor coverings can be damaged by burning cigarette butts, the surface of nora® floor coverings is not compromised. Nicotine remains can be easily removed.



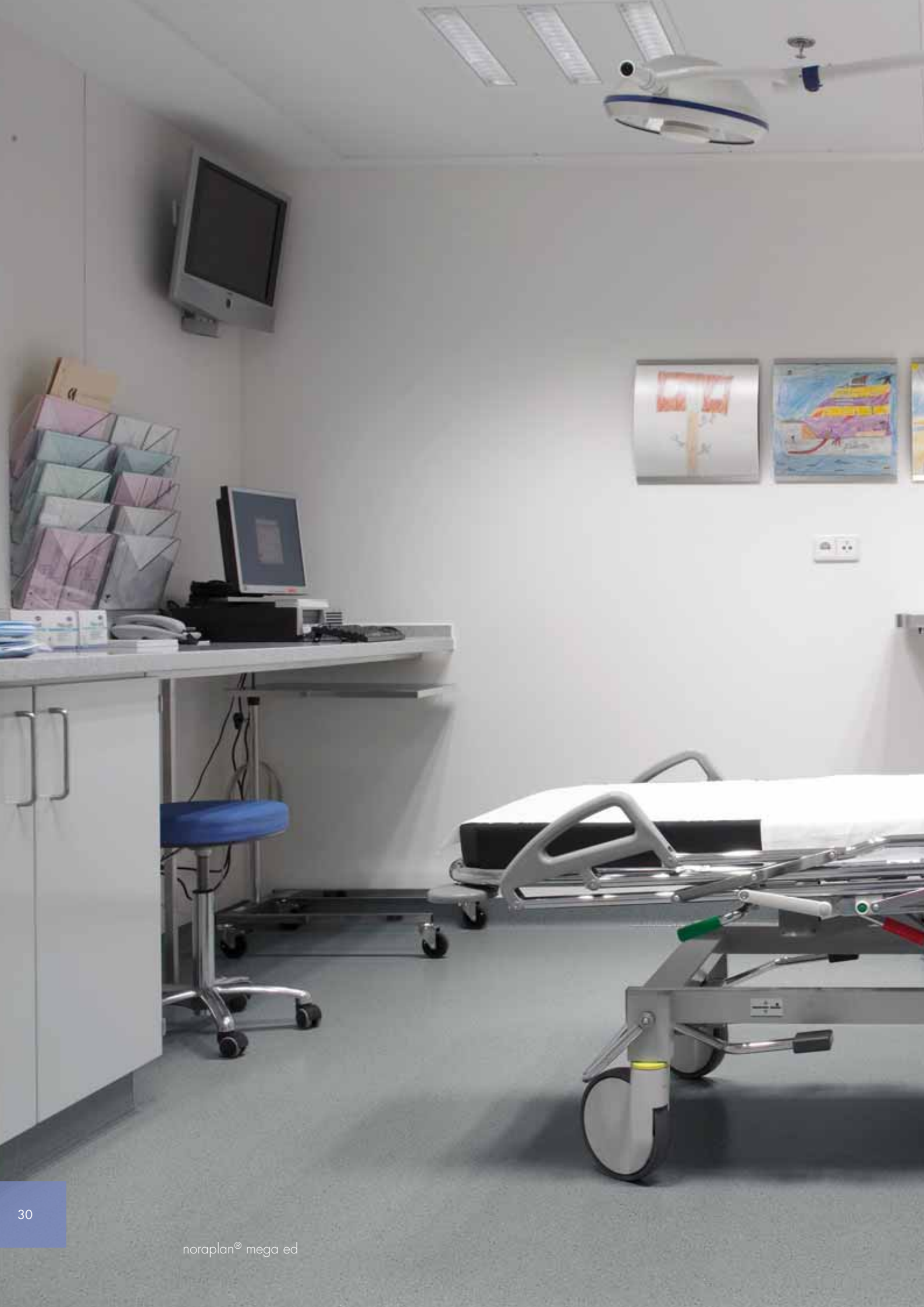
noraplan® uni



norament® 926 grano

**nora® rubber floor coverings
offer numerous options to
combine design and safety.**





Medical department • Locker rooms



nora® rubber floor coverings manage the balancing act between functionality and aesthetics in these areas, too.

In examination rooms and areas where minor operations are performed, electronic examination instruments are often used. In these areas, the use of electrostatically dissipative floor coverings is advisable.



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