



At home all over the world

High performance rubber floorings
for airports

nora[®]

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

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Spot landing with nora® – rubber floorings for airport infrastructure

The airport is often the first impression a traveller gains from a city, a region, or even a country. An appealing atmosphere, which is remembered positively, thus plays an important role when designing and equipping airports. At least of equal importance is, however, the consideration of economy and safety aspects.

The special properties of nora® rubber floorings combine these functional demands with great design freedom and open up numerous options to give an airport a distinctive look.

Rubber: a raw material offering many advantages

- Extraordinary wear resistance and thus a long useful life
- High fire safety – no hydrochloric gas, no hydrochloric acid, no dioxins and no furans
- Safe in fire-toxicological terms complying with DIN 53 436
- High level of slip resistance and high walking comfort
- Easy cleaning and stain removal – permanently without coating, thus low life cycle costs
- Excellent environmental compatibility and excellent indoor air quality
- Improved acoustics thanks to excellent footfall sound absorption
- No PVC, plasticizers (phthalates) or halogens (e.g. chlorine)

nora systems 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, the nora® brand is the market leader in rubber floorings. We were able to implement the first airport projects more than 40 years ago: The Frankfurt Rhine-Main airport was equipped by us with 80,000m² of rubber flooring. Today, attractive design solutions by nora systems can be found in airports all over the world.



nora systems offers everything: **design, safety, and comfort**

In heavily frequented transport buildings, an attractive interior design but above all fire safety and fire-toxicological safety play an important role. Where long distances are to be covered with various foot wear, wheeled bags, trolleys or wheelchairs, walking comfort, acoustics, and slip resistance should also be considered.

Fire safety

nora® floor coverings meet the current requirements on fire safety and are flame-retardant according to EN 13 501, Part 1, or DIN 4102. With the approval of the local fire safety authorities, special fire-protection grades can also be used in areas where non-inflammable materials are required.

Protection against health-damaging gases

nora® rubber floorings do not contain any PVC and halogens (e.g. chlorine). In case of fire, no hydrochloric gas is released which might lead to caustic burns of the respiratory tract. The absence of halogens also means that no toxic, halogenated dioxins and furans are released by nora® floor coverings in case of fire.

For a major part of the nora® floor coverings, the gasses released in a fire are classified as fire-toxicologically safe according to DIN 53 436.

Slip resistance and resistance to cigarette burns

nora® floor coverings meet the anti-slip property class R9 according to the directive BGR 181 or GUV-R 181. For areas with specifically high demands on slip resistance, we also offer grades of the classes R10 and even R11.

The resistance to cigarette burns of nora® floor coverings is an asset, specifically in day rooms and smoking areas.

Acoustics and walking comfort

Thanks to their life-long resilience, nora® floor coverings with their cushioning effect contribute to a high walking and standing comfort. nora® floor coverings protect joints and the back and thus counteract symptoms of fatigue of the passengers.

nora® floor coverings also have an excellent footfall sound absorption as well as a significantly lower noise development when walked or rolled on - as compared to hard coverings such as e.g. stone.



Pudong International Airport, norament® 925 grano



Fantastic options

for your design ideas

nora systems is all about you, our customer. Architects, designers, property developers or property managers – we are working closely with you and help you to bring your vision to life.

nora® - the system for superior design:

- Broad colour range with more than 300 standard colours
- Numerous designs and surfaces
- Excellently combinable colours and surfaces for the implementation of routing systems, inlay and combination installations

Individual and up close and personal

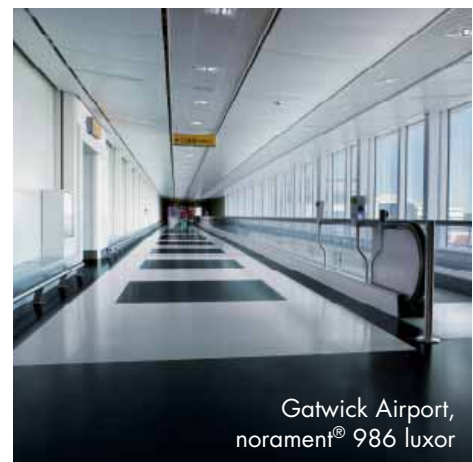
As your project partner, we already support you in the concept phase. Together with you, we develop flooring solutions which consider the requirements and demands of your project.

Virtual design of rooms

The nora® Interior Design Studio (www.nora.com) offers you the possibility to test the room effect of various nora® products, designs and colours on various areas of an airport.

Working with inlays

Implement your inlays based on our specifications or design your own fantasies. Our ultra-modern ultrasound cutting machine cuts almost any motive into 1.00% matching pieces which can be installed without joint-sealing thanks to the dimensional stability of nora® floor coverings.



Remarkable architecture

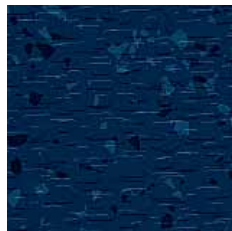
loves extraordinary floor covering solutions

nora® means enduring floor coverings with a high-quality visual appearance which often last several decades without losing their attractive look.

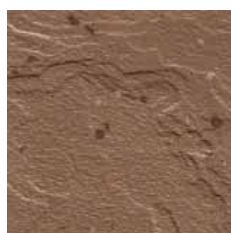
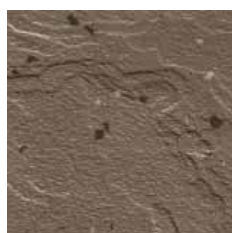
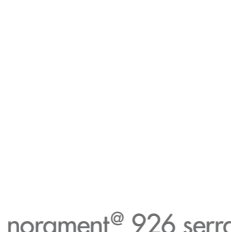
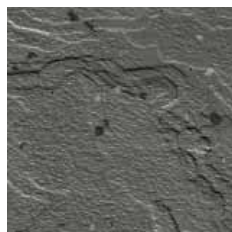
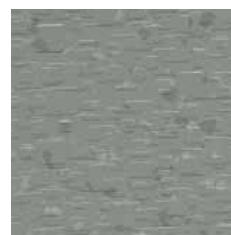
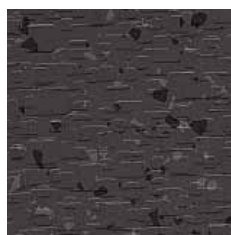
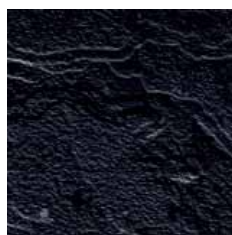
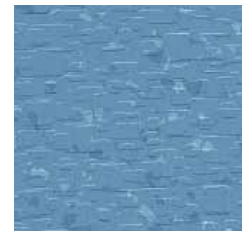
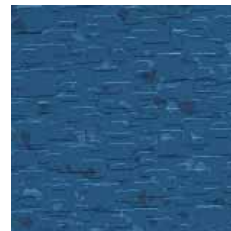
Individual design with a long-term effect

The nora® standard portfolio covers 300 different colour shades from discrete to striking and from warm to cool. The array of options is extended many times over thanks to the different granulation levels and surface structures.

The system is rounded off by a comprehensive range of accessories fully matched in colours as well as different grades and functionalities of one and the same design and creates a range of fantastic options.

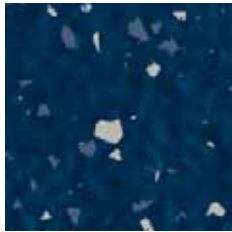


norament® 926 strada

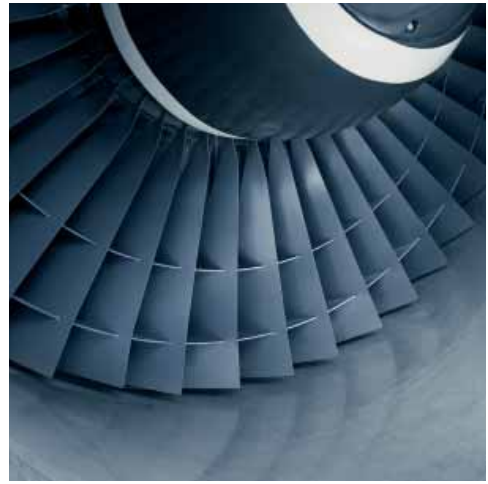
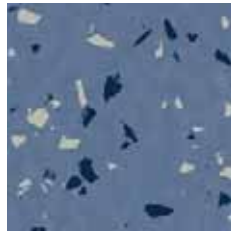
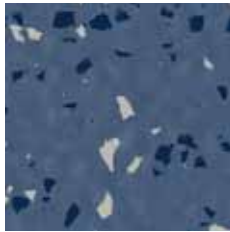


norament® 926 serra

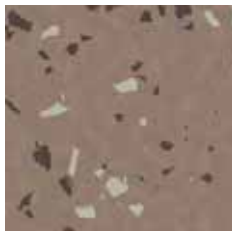
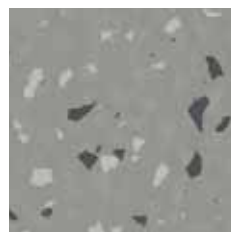
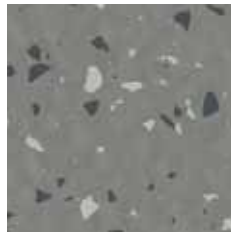
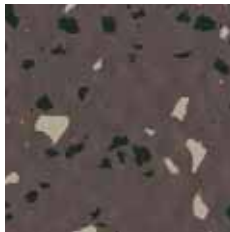
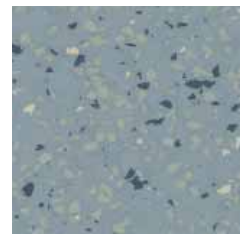
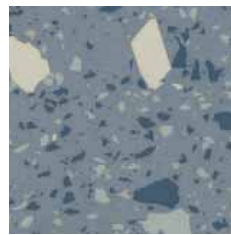
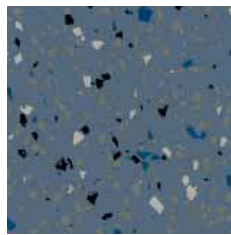
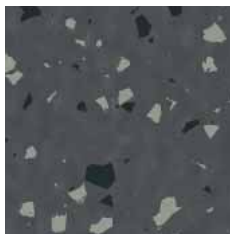
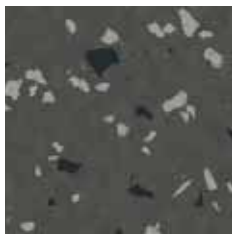
The colour samples shown here only represent a small selection of the comprehensive nora® colour range.



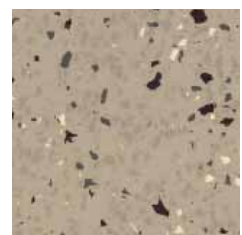
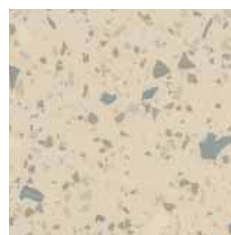
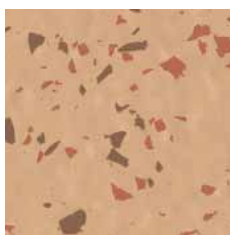
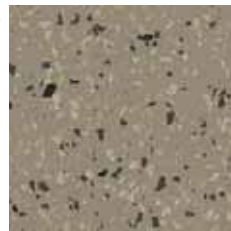
norament® 926 grano



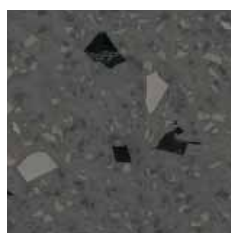
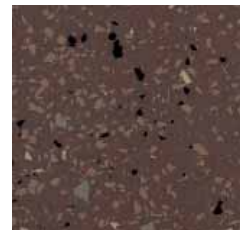
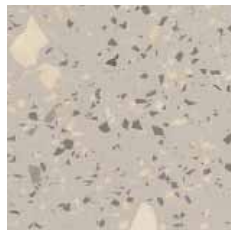
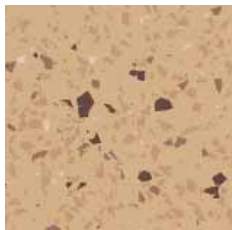
norament® 926



norament® 926 grano



norament® 986 luxor





nora® saves time – and a lot of money

When selecting the floor covering, 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 are paid for care and maintenance during the entire life time.

nora® - easy to clean

nora® rubber floorings 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® floorings 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 floorings, nora® rubber floorings do not require any additional coatings or paints. Thus, neither unsightly pathways as a result of use-related abrasion nor increased contamination, chipping, scratches or discolourations of the coating may result.

Resistance to stains

nora® rubber floorings are resistant to stains. Spilled liquids such as coffee, tea or juice can be easily mopped.

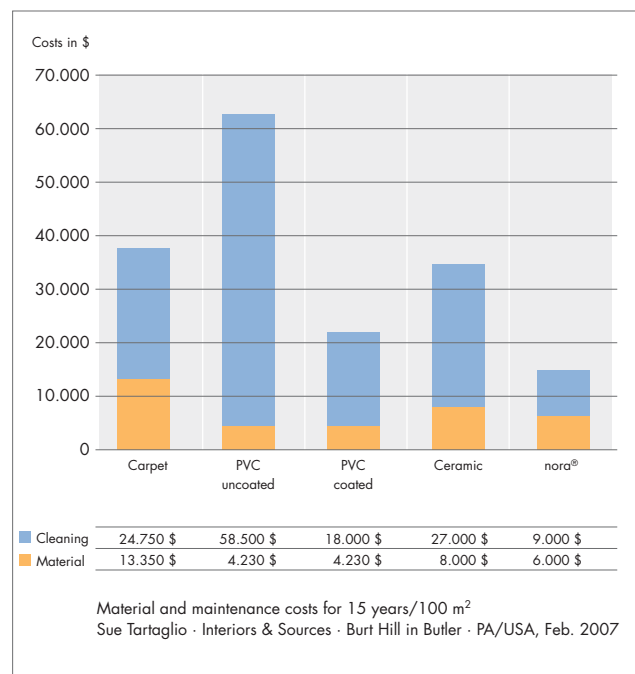
*) Please see the latest version of our cleaning and care recommendations.

Huge saving potential

Neutral, independent expert opinions confirm the economy and the huge saving potential when nora® rubber floorings are used.

Please request our special brochure on the economy of nora® floor coverings.

Economic efficiency comparison: life cycle costs



Multiple award winner

with the highest commitment

Dealing with nature and its resources with consideration has always been part of the nora systems corporate culture. Our relationship to sustainability goes beyond the consideration of our products and their special raw material. It is reflected in almost all phases of our daily work, for example, when we consequently implement environmentally friendly production methods.

Responsible dealing with natural resources

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.

nora® rubber floorings

- 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 e.g. solvent-free dispersion adhesives
- are low in emissions

High quality for a long life

Thanks to their high quality, nora® rubber floorings are extremely resistant to abrasion and wear. Even after decades of use, 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 floorings are “made in Germany”.

They are manufactured on state-of-the-art production lines which are subject to strict ecological requirements.

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

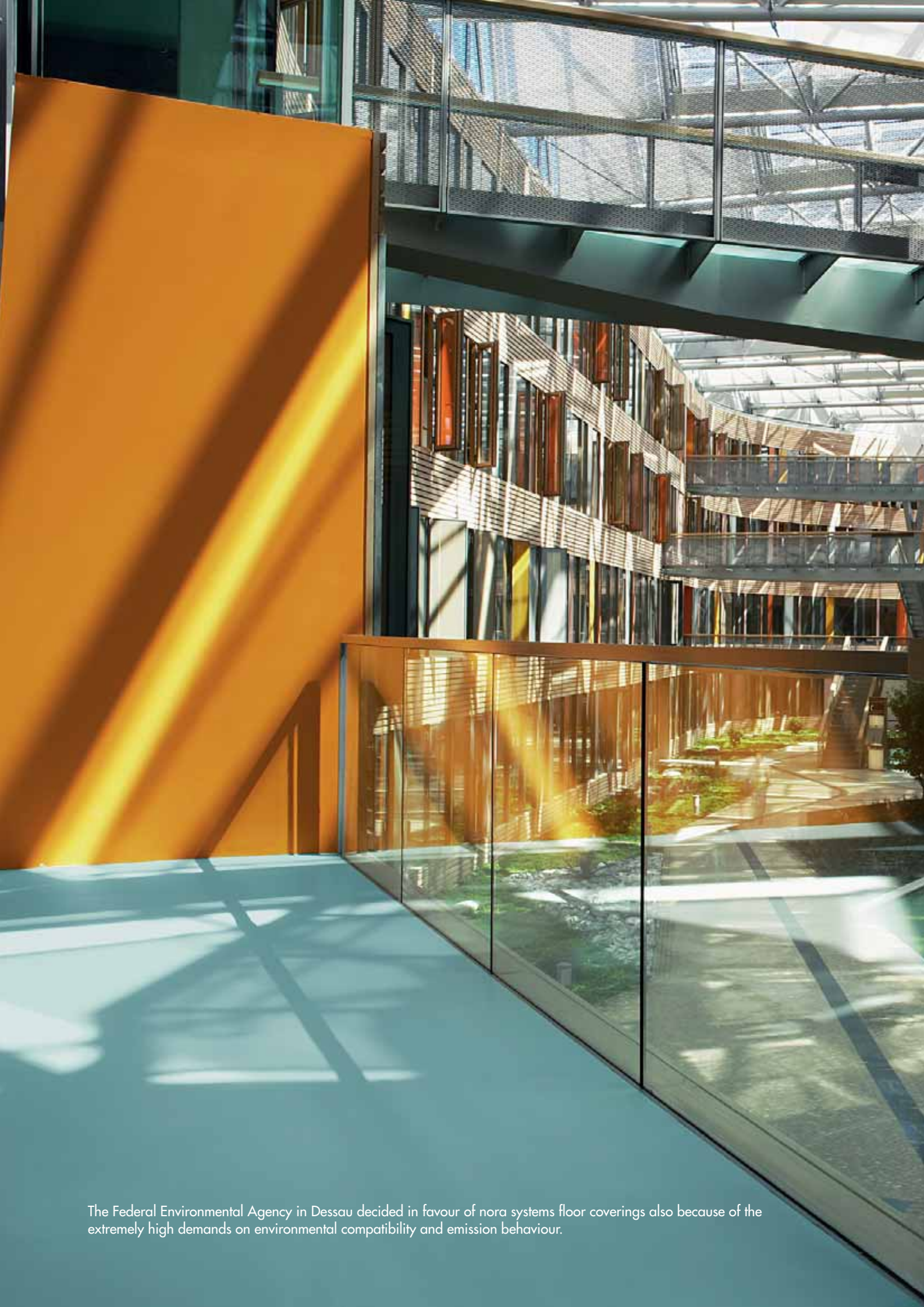
Multiple awards and ecolabels

The Blue Angel, the BRE 'A+' Rating, 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 are proof that we take our responsibility for the environment and society very seriously.



DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen e.V.





The Federal Environmental Agency in Dessau decided in favour of nora systems floor coverings also because of the extremely high demands on environmental compatibility and emission behaviour.



Stair installation with norament® 923

nora® is the system

where everything matches

A wide range of floor coverings with different functions are required to equip an airport: various thicknesses which offer the required pressure load-bearing capability, electrostatically dissipative floorings for areas where sensitive electronic devices are used and last but not least sophisticated solutions for the equipment of stair areas.

Systems for corridors and stairs

nora® system solutions for corridors and stair areas represent the optimal combination of design, safety and comfort for heavily frequented traffic areas.

- Identical designs and colours on stairs and floors for a uniform integrated design
- Complete range of accessories consisting of stair nosings, skirtings, and landing profiles
- Reduced slipping risks thanks to excellent anti-slip properties
- Signal strips (also phosphorescent) integrated in stair nosings and treads
- High level of footfall sound absorption



- Installation on the stair without blocking the stair area possible with the special dry adhesive nora® Stepfix 240

Floorings for special demands

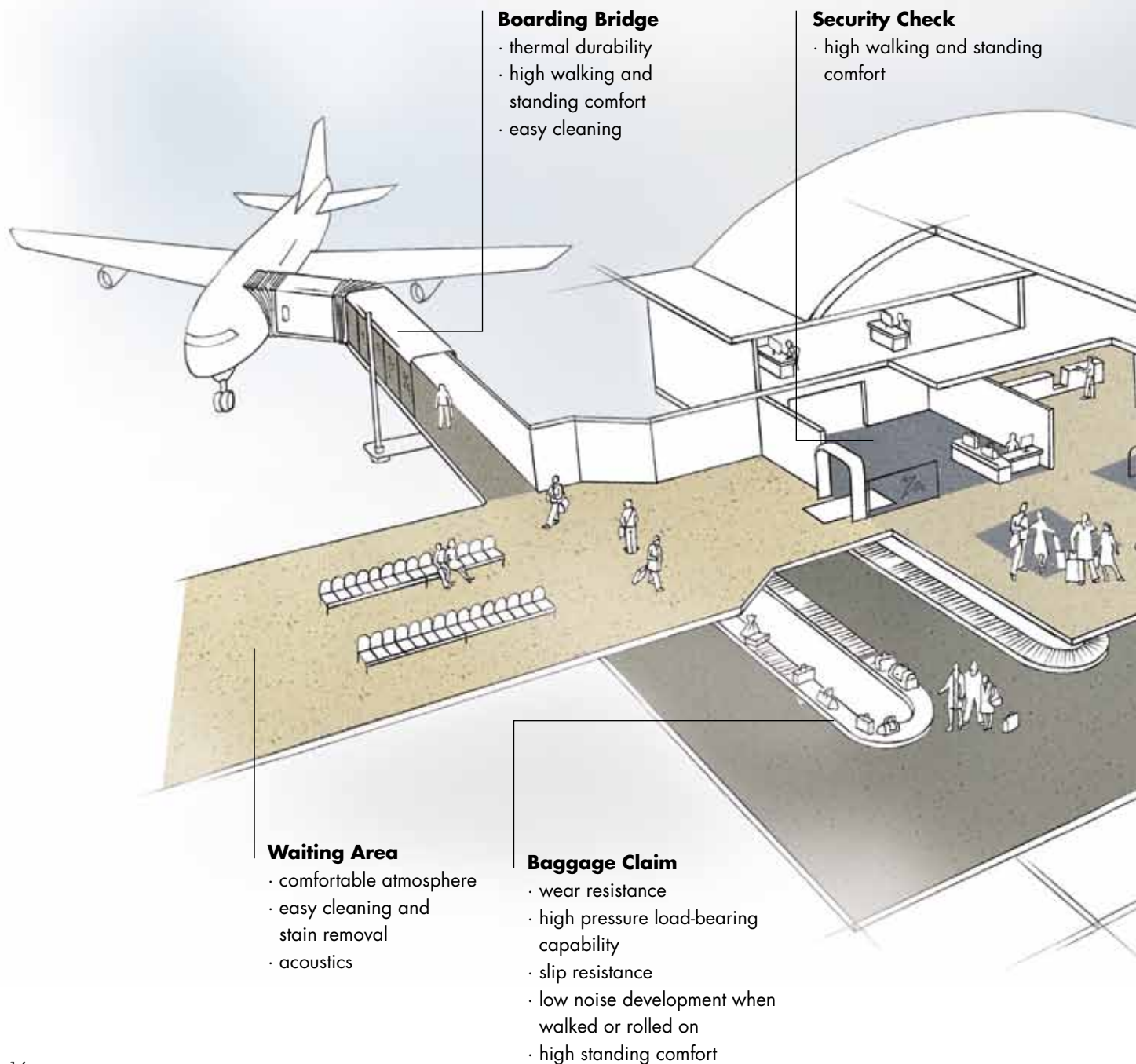
- Largely resistant to oils and greases
- Extremely UV-resistant
- Suitable for fork lift trucks (up to a dynamic pressure load-bearing capability of 6N/mm²)
- Extremely fire-resistant

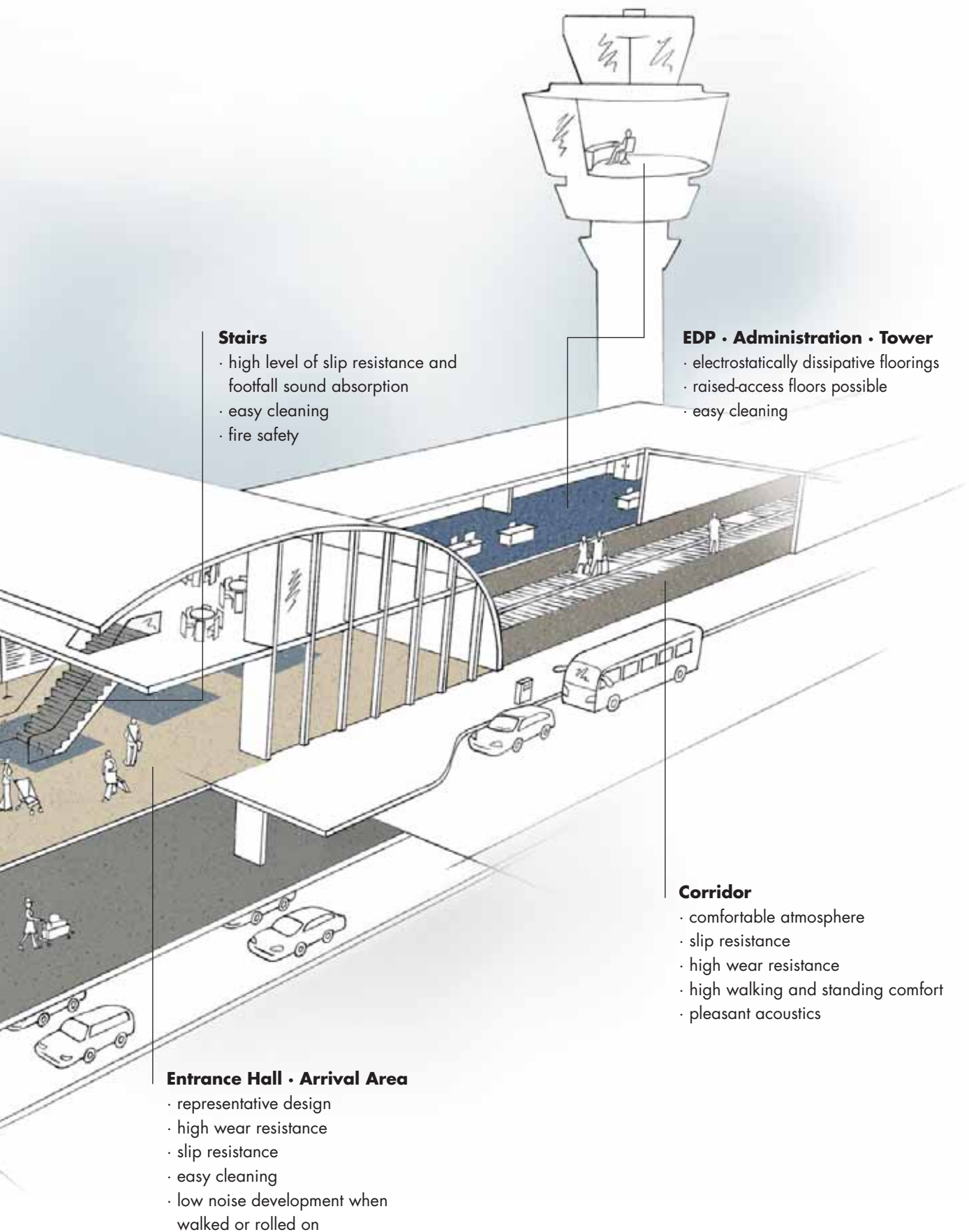
Electrostatically dissipative floorings

Every day, thousands of passengers must be brought to their destinations safely. To accomplish this, technical devices must function properly 24/7. Electrostatically dissipative floor coverings – identified by the abbreviation “ed” but with the same design as standard products – protect reliably against any interference by electrostatic discharges.

Where others reach their limits, nora systems just starts

The versatile floor coverings of nora systems with their many specific properties meet the diverse demands of any airport from the entrance area to the baggage claim.





Stairs

- high level of slip resistance and footfall sound absorption
- easy cleaning
- fire safety

EDP • Administration • Tower

- electrostatically dissipative floorings
- raised-access floors possible
- easy cleaning

Corridor

- comfortable atmosphere
- slip resistance
- high wear resistance
- high walking and standing comfort
- pleasant acoustics

Entrance Hall • Arrival Area

- representative design
- high wear resistance
- slip resistance
- easy cleaning
- low noise development when walked or rolled on



Xianyang International Airport, norament® 925 lago

Entrance Hall • Arrival Area

Pleasantly quiet

The highly frequented entrance and arrival areas of airports are subjected to hard heels and rolling trolleys every single day. In these areas, the low noise development of our rubber floorings has a beneficial effect. Where walking on stone floors quickly becomes a noise nuisance, rubber is the low-noise alternative.

nora® floor coverings are in addition extremely wear-resistant with an additional asset for safety and economy thanks to their slip resistance and easy cleaning.

norament® floorings with a thickness of 3.5mm are suitable for a dynamic pressure load of up to 6N/mm². This is a multiple of the dynamic pressure load typically created by common trolleys*.

Use the comprehensive nora® product range for an attractive design in the colours of your choice. We also manufacture your designs such as e.g. logos or art designs in our inlay centre as desired by you and deliver them cut to size and ready for laying.

*The dynamic pressure load of a common trolley with 3 rolls (Ø 200mm, width 20mm) made of vulcanite and a maximum load of approx. 250kg arithmetically only amounts to 0.78N/mm².



Shenyang Taoxian Airport,
Design 14



Security Check

Comfortable – even if it takes a bit longer

Protracted security checks easily become a nuisance – in particular when the joints hurt and the legs are tired. nora® floor coverings retain their resilience over the entire life and thus contribute to a high walking and standing comfort.

In contrast to hard floorings, rubber floorings cushion the steps. They protect joints and the back and thus counteract symptoms of fatigue of the passengers.

Baggage Claim

Not a sign of the daily hustle and bustle

Around the baggage carousel, the floor is very intensively stressed by shoes, trolleys and rolling baggage.

The extremely durable nora® floorings continue to positively withstand their environment even after many years of use. Unsightly pathways may not occur in these areas from the start. On top of it, nora® floor coverings provide the required safety thanks to their slip resistance.



Resilient flooring provides for high walking and standing comfort.



norament® 925 grão even resists permanent loads without problems.



Shanghai Hongqiao International Airport, norament® 925 lago

Waiting Area

nora® makes a pleasant atmosphere

Waiting again? This is relieved by an ambience where every passenger can be comfortable. With the nora® product portfolio, you ensure pleasant acoustics when the flooring is walked on thanks to the low noise generation. In addition, you can implement individual and attractive designs. Our huge product range of various colours and designs offers you design options with almost no limits.

Allergic persons can breath without any problems because nora® rubber floorings do not pose any breeding ground for allergy-inducing substances as might e.g. be specifically the case with textile floor coverings.

The stain resistance of our floorings as well as their easy and economic cleaning – specifically compared to carpets – also pays off in the waiting area.

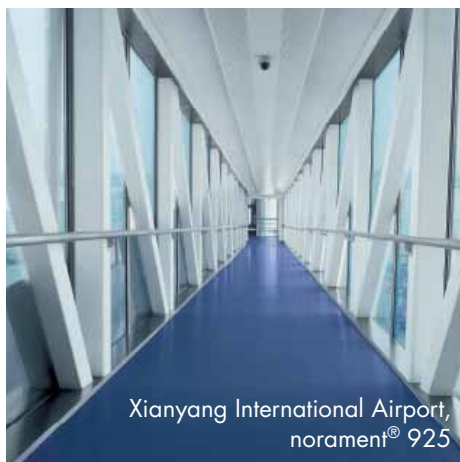


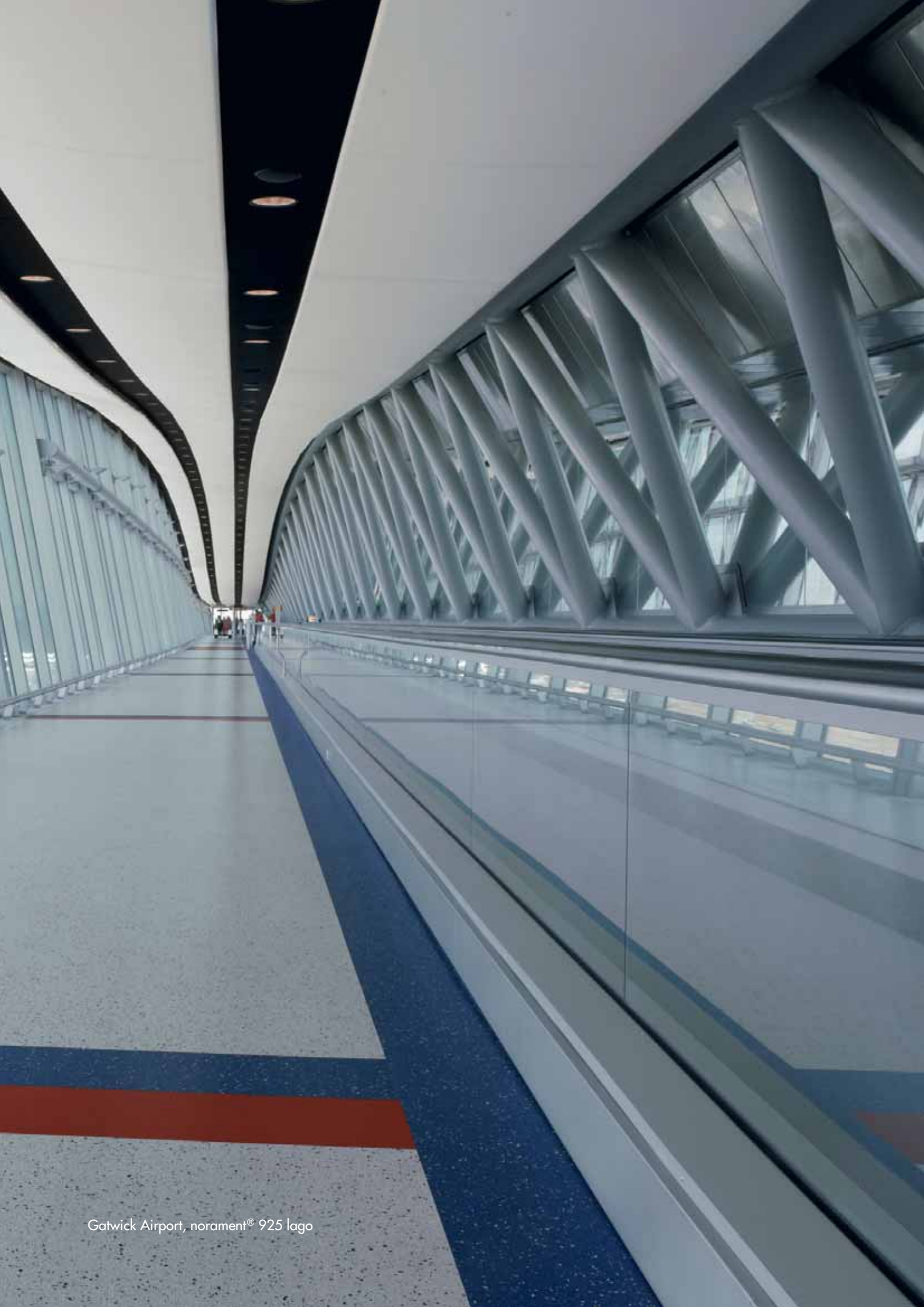
Corridor • Boarding Bridge

Fatigue-free on long distances

Slip resistance, thermal durability and wear resistance are properties which play an important role when equipping corridors, gangways and boarding bridges.

Our norament® products do not only decisively contribute to the visual effect but provide a high walking and standing comfort thanks to their resilience and when bonded are insensitive to temperature fluctuations.







noraplan® plus ed on raised-access floor elements

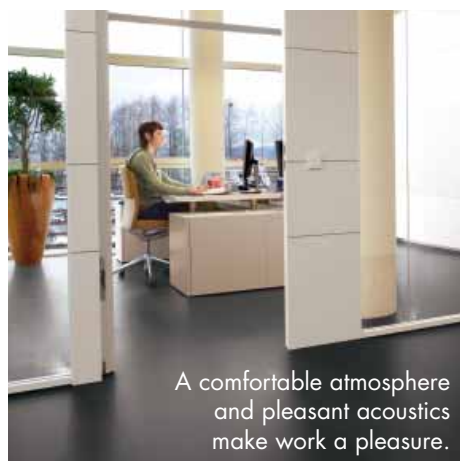
EDP • Tower • Administration • Technical Area

Safety for electronic devices

In places where technical devices must function properly 24/7, electrostatically dissipative floor coverings are the right choice. Our ed floorings protect electronic devices against malfunctions caused by electrostatic discharges. Visually, they cannot be differentiated from standard grades with identical designs and thus guarantee a seamless installation in the entire airport. Even raised-access floors are no problem for nora®.

Excellent walking and standing comfort and good acoustics contribute to a pleasant working atmosphere.

In technical areas, the high performance and robust floor coverings of nora® are sought after. On the one hand, they often have to resist dynamic pressure loads, on the other hand they must dissipate electrostatic discharges to prevent damages in electronic circuits. If oil and grease resistance is required, nora® also offers suitable solutions.



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