



DIN 3763 AND DIN 3762:
BACKGROUND, REQUIREMENTS, CLASSIFICATION

Technical regulations for the use of elastic barn flooring systems





Elastic barn flooring systems are used widely in livestock husbandry. These systems tend to differ in their design, softness and intended use. A team of experts in the DIN standards committee “Elastomer Mats” has been working on defining technical regulations for this specific area of application. The goal: Uniform and binding standards for high-quality products that offer animal-friendly comfort. The barn flooring in a cattle housing facility is the only piece of barn equipment that is used by the animals 24 hours a day, 7 days a week. Top-quality elastic barn flooring promotes animal health and well-being (joint health, hoof health, natural animal behavior, etc.). This obviously confirms the relevance of technical regulations for elastic barn mats.

Why new standards?

Until now, there has been a definite lack of technical rules and guidelines in both support programs and legally binding regulations for farmers. For example, there is no explanation of the term “comfort mat” in the German federal Agricultural Investment Support Program (AFP) for dairy cattle husbandry. A “soft or elastically deformable” substrate is also prescribed for calves in the latest version of the German Animal Protection - Livestock Ordinance (TierSchNutzTV). However, the terms softness and elasticity are not defined further. This gap is to be closed with these standards.

Specifically, two DIN standards are relevant for the use of elastic barn mats in the walking and lying areas of calves, fattening bulls and dairy cows: **DIN 3763** (technical and animal-related minimum standards for elastic barn flooring, classification into softness classes) and **DIN 3762** (test method for relevant pollutants).

Advantage for farmers

Focusing on animal welfare and consumer protection, the two DIN standards set uniform standards and minimum requirements are clearly defined. Products can be divided into comfort classes. This brings transparency to the market and facilitates product selection. This means that requirements in regulations and support programmes can now be defined in a more specific and factually correct manner. Binding standards provide farmers with guidance when making investments and stipulate legal regulations by which they must abide. The regulations of individual German federal states already refer to DIN conformity.

DIN 3763:2022 “Elastic floorings for cattle and dairy cows walking and rest surfaces – Requirements and testing”

This is based on the DLG (German Agricultural Society) test programme, which has been used by DLG for more than 30 years and has been continuously developed during this period. Standard DIN 3763 specifies **requirements for the walking and lying area of cattle**, especially fattening bulls, dairy cows, young cattle and calves. Products must meet certain **standards in terms of durability** (e.g. abrasion resistance, acid resistance) and animal welfare (e.g. slip resistance) to be compliant with the DIN standard. Further, the products for lying areas and one-area pens areas are divided into classes based on their deformability. The higher the class, the greater the deformation or softness. There is only one class for walking area mats.

KRAIBURG mats are DIN-compliant

All KRAIBURG walking area floorings are DIN-compliant. When it comes to lying mats as well as mats for one-area pens, KRAIBURG is able to offer suitable products in every comfort class.



Area	Class	Requirement Deformability for walking measurement (in mm)	Requirement Deformability for lying measurement (in mm)	Product
Walking area	-	1.0 to 9.0	-	all KRAIBURG walking area floorings
Lying area	Class 1	-	5.0 to 8.9	KEN, LENTA
Lying area	Class 2	-	9.0 to 15.9	CALMA, KIM
Lying area	Class 3	-	16.0 to 24.9	KKM, WELA, Softbed LongLine
Lying area	Class 4	-	≥ 25.0	WINGFLEX, KEW Plus (TarsaCare)
One-area pens	Class 1	≥ 1.0	(2.0 to 4.9)*	LOSPA SB, LOSPA swiss
One-area pens	Class 2	≥ 1.0	≥ 5.0*	KURA SB, KURA S

* measured after permanent tread load for walking measurement

Source: DIN notifications 8/2022

Source: KRAIBURG laboratory (also compare the DLG test reports)

Further requirements	Above mentioned products
Abrasion resistance	✓
Permanent tread load / wear	✓
Permanent tread load lasting deformation	✓
Acid resistance	✓
Slip resistance	✓
PAH migration (<i>continuously monitored by DLG to standard DIN 3762:2022</i>)	✓

i Flooring that meets the requirements of the new DIN 3763:2022 is considered sufficiently soft or elastically deformable within the meaning of the new German Animal Protection - Livestock Ordinance (TierSchNutzTV).

DIN 3762:2022 “Rubber flooring – Determination of the migration of polycyclic aromatic hydrocarbons (PAHs)”

In addition to animal welfare, the DIN standards also stand for consumer protection. Standard DIN 3763 defines migration limits for polycyclic aromatic hydrocarbons (PAHs). Standard DIN 3762 specifies a test method for determining the migration of polycyclic aromatic hydrocarbons (PAHs) from synthetic barn flooring. DIN 3763-compliant flooring thus represents a safe application in which there is no questionable transfer of PAHs into the farm animal and its products.

Info: Polycyclic aromatic hydrocarbons (PAHs)

What are PAHs?

Polycyclic aromatic hydrocarbons (PAHs) are produced in the combustion of organic matter and have a ubiquitous occurrence in the environment. A well-known process is, for example, the burning of barbecue charcoal. Some PAH compounds are considered to be carcinogenic.

It comes down to the plasticizer

In terms of rubber, PAHs can be found in the carbon black (immobile, chemically bound) and in the plasticizer (mobile, volatile). Depending on the actual material, there are different types of plasticizers (e.g. fats, oils, water). In the EU, label-free plasticizers (with a minimum PAH content) have had to be used since 2010. Instead of traditional plasticizer oils, KRAIBURG only uses vegetable oils for reasons of safety. The decisive factor is whether or not PAHs from the products are released into the environment – and thus latch onto the skin of humans and animals, i.e. whether they migrate or not.

Continuously monitored by DLG

If a company holds the Quality Seal CONTINUOUS MONITORING, the product and production quality in the company in question is reviewed annually by DLG. Quality assurance is assessed throughout the entire manufacturing process, from the raw material to the finished product. The process audit is repeated annually and thus ensures the highest quality and transparency on a permanent basis. Our environmental compatibility is also monitored by the PAH test to standard DIN 3762. KRAIBURG has passed the annual audit since the seal was introduced in 2018.



DIN-compliant rubber flooring not only fulfills the requirements of the German Animal Protection - Livestock Ordinance (TierSchNutztV), but also contributes to animal, environmental and consumer protection!