

SVENSK STANDARD

SS-ISO 22941:2021

Gummimattor för boskap – Specifikation (ISO 22941:2021, IDT)

Rubber sheets for livestock – Specification (ISO 22941:2021, IDT)



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Standarden är framtagen av kommittén för Gummi och gummiprodukter, SIS/TK 154.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

Den internationella standarden ISO 22941:2021 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 22941:2021.

The International Standard ISO 22941:2021 has the status of a Swedish Standard. This document contains the official English version of ISO 22941:2021.

LÄSANVISNINGAR FÖR STANDARDER

I dessa anvisningar behandlas huvudprinciperna för hur regler och yttre begränsningar anges i standardiseringsprodukter.

Krav

Ett krav är ett uttryck i ett dokumentets innehåll som anger objektivet verifierbara kriterier som ska uppfyllas och från vilka ingen avvikelse tillåts om efterlevnad av dokumentet ska kunna åberopas. Krav uttrycks med hjälpverbet ska (eller ska inte för förbud).

Rekommendation

En rekommendation är ett uttryck i ett dokumentets innehåll som anger en valmöjlighet eller ett tillvägagångssätt som bedöms vara särskilt lämpligt utan att nödvändigtvis nämna eller utesluta andra. Rekommendationer uttrycks med hjälpverbet bör (eller bör inte för avrådanden).

Instruktion

Instruktioner anges i imperativ form och används för att ange hur något görs eller utförs. De kan underordnas en annan regel, såsom ett krav eller en rekommendation. De kan även användas självständigt, och är då att betrakta som krav.

Förklaring

En förklaring är ett uttryck i ett dokumentets innehåll som förmedlar information. En förklaring kan uttrycka tillåtelse, möjlighet eller förmåga. Tillåtelse uttrycks med hjälpverbet får (eller motsatsen behöver inte). Möjlighet och förmåga uttrycks med hjälpverbet kan (eller motsatsen kan inte).

READING INSTRUCTIONS FOR STANDARDS

These instructions cover the main principles for the use of provisions and external constraints in standardization deliverables.

Requirement

A requirement is an expression, in the content of a document, that conveys objectively verifiable criteria to be fulfilled, and from which no deviation is permitted if conformance with the document is to be claimed. Requirements are expressed by the auxiliary shall (or shall not for prohibition).

Recommendation

A recommendation is an expression, in the content of a document, that conveys a suggested possible choice or course of action deemed to be particularly suitable, without necessarily mentioning or excluding others. Recommendations are expressed by the auxiliary should (or should not for dissuasion).

Instruction

An instruction is expressed in the imperative mood and is used in order to convey an action to be performed. It can be subordinated to another provision, such as a requirement or a recommendation. It can also be used independently and is then to be regarded as a requirement.

Statement

A statement is an expression, in the content of a document, that conveys information. A statement can express permission, possibility or capability. Permission is expressed by the auxiliary may (its opposite being need not). Possibility and capability are expressed by the auxiliary can (its opposite being cannot).

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Rubber sheets for livestock — Dairy cattle — Specification

1 Scope

This document specifies the characteristics of solid rubber sheets for dairy cattle. These sheets are used in a walking or lying area. This document does not include design of the product.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 48-4, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 4: Indentation hardness by durometer method (Shore hardness)*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 815-1:2019, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 1: At ambient or elevated temperatures*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 3302-1, *Rubber — Tolerances for products — Part 1: Dimensional tolerances*

ISO 4649:2017, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

walking area

passage or area where cattle walk through in housing and stand for milking

3.2

lying area

area where cattle rest in housing

4 Classification

A rubber sheet is classified into two types depending on the application:

- walking area;
- lying area.

5 Requirements

5.1 General

Under visual inspection, the rubber sheets shall be free from any visual defects such as foreign materials, holes, blisters, porosity and indentations that may adversely affect performance and appearance.

5.2 Dimensions

The length, width and thickness of the rubber sheets shall be agreed between the interested parties. The tolerances of all dimensions shall conform to ISO 3302-1, class M4.

At least three measurements of each dimension shall be determined, and the median value of each dimension reported.

5.3 Physical properties

The physical properties of rubber sheets shall comply with the requirements given in [Table 1](#).

The nominal hardness of the rubber sheets shall be as agreed between the purchasers and the manufacturers with tolerance ± 5 Shore A.

Table 1 — Physical property requirements

Physical properties	Requirement		Test method
	Walking area	Lying area	
Hardness, Shore A	50 to 80	50 to 80	ISO 48-4
Tensile strength, MPa, min.	3	3	ISO 37, dumbbell type 1
Elongation at break, %, min.	80	80	ISO 37, dumbbell type 1
After accelerated-ageing test			
— Change in hardness, Shore A, max.	± 5	± 5	ISO 188:2011, method A, (70 \pm 1) °C, (72 \pm 2) h
— Change in tensile strength, %, max.	± 20	± 20	
— Change in elongation at break, %, max.	± 30	± 30	
Abrasion resistance, mm ³ , max.	300	300	ISO 4649:2017, method A
Compression set, %, max.	40	25	ISO 815-1:2019, method A (70 \pm 1) °C, 24 ₋₂ ⁰ h
Liquid resistance, %, max.			Annex A
— Change in hardness	± 20	± 20	
— Change in mass	± 20	± 20	