

### SLOVENSKI STANDARD SIST EN IEC 62947:2023

01-januar-2023

Električna straniščna sedala s tušem za gospodinjsko in podobno uporabo - Metode za merjenje lastnosti - Splošne preskusne metode za sedala s tušem

Electrically operated spray toilet seat for household and similar use - Methods for measuring the performance - General test methods of spray seats

iTeh STANDARD PREVIEW

(standards.iteh.ai)

Sièges de toilettes électriques à pulvérisation d'eau pour usages domestiques et analogues - Méthodes de mesure de l'aptitude à la fonction - Méthodes d'essai générales des sièges de toilettes à pulvérisation d'eau

Ta slovenski standard je istoveten z: EN IEC 62947:2022

ICS:

97.180 Razna oprema za dom in

trgovino

Miscellaneous domestic and

commercial equipment

SIST EN IEC 62947:2023 en

**SIST EN IEC 62947:2023** 

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62947:2023

https://standards.iteh.ai/catalog/standards/sist/ee5393c8-a90b-4eda-bc64-9034f85f6b67/sist-en-iec-62947-2023

**FUROPEAN STANDARD** NORME EUROPÉENNE

**EN IEC 62947** 

**FUROPÄISCHE NORM** 

November 2022

ICS 97.180

#### **English Version**

Electrically operated spray seats for household and similar use -Methods for measuring the performance - General test methods of spray seats (IEC 62947:2022)

Sièges de toilettes électriques à pulvérisation d'eau pour usages domestiques et analogues - Méthodes de mesure de l'aptitude à la fonction - Méthodes d'essai générales des sièges de toilettes à pulvérisation d'eau (IEC 62947:2022)

Elektrisch betriebene Toilettensitze mit Duschfunktion für den Hausgebrauch und ähnliche Zwecke - Verfahren zur Messung der Gebrauchseigenschaften - Allgemeine Prüfverfahren für Toilettensitze mit Duschfunktion (IEC 62947:2022)

This European Standard was approved by CENELEC on 2022-11-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovania, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62947:2022 (E)

### **European foreword**

The text of document 59L/210/CDV, future edition 1 of IEC 62947, prepared by SC 59L "Small household appliances" of IEC/TC 59 "Performance of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62947:2022.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2023-08-15 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-11-15 document have to be withdrawn

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

### **Endorsement notice**

The text of the International Standard IEC 62947:2022 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60456 NOTE Harmonized as EN 60456

IEC 60704-1 NOTE Harmonized as EN IEC 60704-1

IEC 60704-2 (series) NOTE Harmonized as EN 60704-2 (series)

EN IEC 62947:2022 (E)

### Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: <a href="www.cenelec.eu">www.cenelec.eu</a>.

<u>Publication</u> <u>Year</u> <u>Title</u> <u>EN/HD</u> <u>Year</u> IEC 60335-2-84 2019 Household and similar electrical appliancesEN IEC 60335-2-84 2021

- Safety - Part 2-84: Particular requirements for toilet appliances

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62947:2023

https://standards.iteh.ai/catalog/standards/sist/ee5393c8-a90b-4eda-bc64-9034f85f6b67/sist-en-iec-62947-2023

**SIST EN IEC 62947:2023** 

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62947:2023

https://standards.iteh.ai/catalog/standards/sist/ee5393c8-a90b-4eda-bc64-9034f85f6b67/sist-en-iec-62947-2023



IEC 62947

Edition 1.0 2022-10

### INTERNATIONAL STANDARD

### NORME INTERNATIONALE



Electrically operated spray seats for household and similar use – Methods for measuring the performance – General test methods of spray seats

Sièges de toilettes électriques à pulvérisation d'eau pour usages domestiques et analogues – Méthodes de mesure de l'aptitude à la fonction – Méthodes d'essai générales des sièges de toilettes à pulvérisation d'eau de de de l'aptitude à la fonction d'eau de de l'essai générales des sièges de toilettes à pulvérisation d'eau de de l'estat de la fonction d'eau pour usages domestiques et analogues – Méthodes de mesure de l'aptitude à la fonction – Méthodes de l'estat de la fonction d'eau de l'estat de la fonction d'eau de l'estat de la fonction d'eau de l'estat de la fonction de la foncti

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 97.180 ISBN 978-2-8322-5814-9

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

### CONTENTS

FC	DREWC	)RD	5	
IN	TRODU	JCTION	7	
1	Scop	oe	8	
2	Norn	Normative references		
3	Term	ns and definitions	8	
4	General test conditions			
_	4.1	General		
	4.1	Ambient conditions		
	4.3 Electric supply			
	4.4	Water supply		
	4.5	Parameter, unit and minimum measuring accuracy of instruments		
5		y performancey		
Ü	5.1	Spray temperature value, stability, reaction time and warm water duration		
	5.1.1			
	5.1.2	·		
	5.1.3			
	5.2	Spray temperature stability under spray pressure change		
	5.2.1	Setup Setup A NID A DID DID TV	13	
	5.2.2		13	
	5.2.3			
	5.3	Spray flow rate	15	
	5.3.1	·		
	5.3.2	Measurement method	15	
	5.3.3 https://standards.iteli.al/catalog/standards/sist/ee5393c8-a90b-4eda-bc64- 5.4 Spray area 903418516b6 //sist-en-iec-62947-2023			
	5.4	Spray area	16	
	5.4.1			
	5.4.2	Measurement method	18	
	5.4.3	Results	19	
	5.5 Spray efficacy			
	5.5.1	Setup	19	
	5.5.2	Measurement method	20	
	5.5.3	Results	20	
	5.6 Wet area			
	5.6.1	•		
	5.6.2	Measurement method	21	
	5.6.3	Results	21	
	5.7 Nozzle self-cleaning			
	5.7.1	•		
	5.7.2			
_	5.7.3			
6	Heat	ed seat performance		
	6.1	Seat surface temperature, unevenness, reaction time		
	6.1.1			
	6.1.2	·		
	6.1.3			
	6.1.4	Results	24	

7 Wa	rm air blower performance	24
7.1	General	24
7.2	Warm air flow rate	24
7.2	1 Setup	24
7.2	2 Measurement method	25
7.2	3 Results	25
7.3	Warm air temperature	26
7.3	'	
7.3.		
7.3		
7.4	Warm air blower capacity and efficacy measurement	
7.4.	· ·	
7.4.		
7.4.		
8 Ene	rgy consumption and water consumption	
8.1	Energy consumption	
8.1.		
8.1.	3,	
8.1.		
8.2	Water consumption	
8.2.	•	
8.2		
8.2.		
	(normative) Preparation of test media for measuring spray performance	
A.1	General SIST EN IEC 62947:2023	
A.2	Composition and aircatalog/standards/sist/ee5393c8-a90b-4eda-bc64- Preparation 9034f85f6b67/sist-en-iec-62947-2023	
A.3	·	
A.4	Validation test	
A.5	Storage	
	(normative) Spray receiver	
	(normative) Preparation of the perforated plate to be filled with test media	
C.1	General	
C.2	Procedure filling the test media	
	(informative) Low ambient temperature test	
D.1	Background	
D.2	Test method	
Bibliogra	aphy	40
Figure 1	- Operation during spray temperature measurement	11
Figure 2	- Spray emission 30 s or more	12
Figure 3	- Spray emission less than 30 s	12
Figure 4	Spray temperature-spray stability measurement method under spray change, minimum to maximum	
Figure 5	—Spray temperature-spray stability measurement method under spray change, maximum to minimum	
•	- Measurement of flow rate	
•	- Perforated plate for enray area measurement	16
- MILITA /	- Perioraled higher for shray area measurement	16

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ELECTRICALLY OPERATED SPRAY SEATS FOR HOUSEHOLD AND SIMILAR USE – METHODS FOR MEASURING THE PERFORMANCE – GENERAL TEST METHODS OF SPRAY SEATS

#### **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies. 62947:2023
- 6) All users should ensure that they have the latest edition of this publication. 8-a90b-4cda-bc64-
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62947 has been prepared by subcommittee 59L: Small household appliances, of IEC technical committee 59: Performance of household and similar electrical appliances. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
59L/210/CDV	59L/216/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

In this standard, the following print types are used:

terms defined in Clause 3: in bold type.

IEC 62947:2022 © IEC 2022

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at <a href="https://www.iec.ch/members\_experts/refdocs">www.iec.ch/members\_experts/refdocs</a>. The main document types developed by IEC are

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- · reconfirmed,
- withdrawn,
- replaced by a revised edition, or

described in greater detail at www.iec.ch/publications.

• amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62947:2023
https://standards.iteh.ai/catalog/standards/sist/ee5393c8-a90b-4eda-bc64

- 6 -

IEC 62947:2022 © IEC 2022

**-7-**

#### INTRODUCTION

In recent years, spray toilet seats (hereinafter **spray seats**) have been used in various places, including households and public facilities.

The International Standard currently available for these products is IEC 60335-2-84, which covers the aspects of electrical safety.

This document covers the aspects of performance and specifies the general test methods for the evaluation of the performance of **spray seats**, including the test methods using substitutes of human faeces that take into consideration the large variety of human faeces substitutes, based on the fact that they are different in terms of composition, and the health condition of the user and their sitting style can have an influence on the overall performance.

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62947:2023
https://standards.iteh.ai/catalog/standards/sist/ee5393c8-a90b-4eda-bc64-