

ILNAS

Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN ISO 9227:2022

Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2022)

Essais de corrosion en atmosphères
artificielles - Essais aux brouillards salins
(ISO 9227:2022)

Korrosionsprüfungen in künstlichen
Atmosphären - Salzsprühnebelprüfungen
(ISO 9227:2022)

11/2022



National Foreword

This European Standard EN ISO 9227:2022 was adopted as Luxembourgish Standard ILNAS-EN ISO 9227:2022.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

English Version

Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2022)

Essais de corrosion en atmosphères artificielles -
Essais aux brouillards salins (ISO 9227:2022)

Korrosionsprüfungen in künstlichen Atmosphären
- Salzsprühnebelprüfungen (ISO 9227:2022)

This European Standard was approved by CEN on 12 November 2022.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 9227:2022) has been prepared by Technical Committee ISO/TC 156 "Corrosion of metals and alloys" in collaboration with Technical Committee CEN/TC 262 "Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

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

This document supersedes EN ISO 9227:2017.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 9227:2022 has been approved by CEN as EN ISO 9227:2022 without any modification.

INTERNATIONAL
STANDARD

ISO
9227

Fifth edition
2022-11

Corrosion tests in artificial atmospheres — Salt spray tests

*Essais de corrosion en atmosphères artificielles — Essais aux
brouillards salins*



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	2
4 Principle.....	2
5 Test solutions.....	2
5.1 Preparation of the sodium chloride solution.....	2
5.2 Preparation of each test solution with pH adjustment.....	3
5.2.1 pH of the salt solution.....	3
5.2.2 Neutral salt spray test.....	3
5.2.3 Acetic acid salt spray test.....	3
5.2.4 Copper-accelerated acetic acid salt spray test.....	4
5.3 Filtration.....	4
6 Apparatus.....	4
6.1 Component protection.....	4
6.2 Spray cabinet.....	4
6.3 Heater and temperature control.....	4
6.4 Spraying device.....	4
6.5 Collecting devices.....	5
6.6 Re-use.....	6
7 Method for evaluating cabinet corrosivity.....	6
7.1 General.....	6
7.2 Reference specimens.....	6
7.3 Arrangement of the reference specimens.....	7
7.4 Determination of mass loss (mass per area).....	7
7.5 Satisfactory performance of cabinet.....	8
8 Test specimens.....	8
9 Arrangement of the test specimens.....	8
10 Operating conditions.....	9
11 Duration of tests.....	9
12 Treatment of test specimens after test.....	10
12.1 General.....	10
12.2 Non-organic coated test specimens: metallic and/or inorganic coated.....	10
12.3 Organic coated test specimens.....	10
12.3.1 Scribed organic coated test specimens.....	10
12.3.2 Organic coated but not scribed test specimens.....	10
13 Evaluation of results.....	11
14 Test report.....	11
Annex A (informative) Example schematic diagram of one possible design of spray cabinet with means for optional treating fog exhaust and drain.....	13
Annex B (informative) Complementary method for evaluating cabinet corrosivity using zinc reference specimens.....	15
Annex C (normative) Preparation of specimens with organic coatings for testing.....	17
Annex D (informative) Required supplementary information for testing test specimens with organic coatings.....	18