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

ILNAS-EN IEC 60455-2:2023

**Resin based reactive compounds used
for electrical insulation - Part 2:
Methods of test**

Reaktionsharzmassen für die
Elektroisolierung - Teil 2: Prüfverfahren

Composés réactifs à base de résines
utilisés comme isolants électriques -
Partie 2: Méthodes d'essai

09/2023



National Foreword

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ILNAS-EN IEC 60455-2:2023

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English Version

**Resin based reactive compounds used for electrical insulation -
Part 2: Methods of test
(IEC 60455-2:2023)**

Composés réactifs à base de résines utilisés comme
isolants électriques - Partie 2: Méthodes d'essai
(IEC 60455-2:2023)

Reaktionsharzmassen für die Elektroisolierung - Teil 2:
Prüfverfahren
(IEC 60455-2:2023)

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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

European foreword

The text of document 15/1006/FDIS, future edition 4 of IEC 60455-2, prepared by IEC/TC 15 "Solid electrical insulating materials" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60455-2:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2024-05-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-08-31

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The text of the International Standard IEC 60455-2:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO 2578:1993 NOTE Approved as EN ISO 2578:1998 (not modified)

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: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050	series	International electrotechnical vocabulary	-	series
IEC 60068-2-10	2005	Environmental testing - Part 2-10: Tests - Test J and guidance: Mould growth	EN 60068-2-10	2005
IEC 60112	2020	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN IEC 60112	2020
IEC 60216	series	Electrical insulating materials - Thermal endurance properties	EN 60216	series
IEC 60296	2020	Fluids for electrotechnical applications - Mineral insulating oils for electrical equipment	EN IEC 60296	2020
IEC 60426	2007	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods	EN 60426	2007
IEC 60455-1	1998	Resin based reactive compounds used for electrical insulation - Part 1: Definitions and general requirements	EN 60455-1	1998
IEC 60455-3	series	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials	EN 60455-3	series
IEC 60455-3-8	2021	Resin based reactive compounds used for electrical insulation - Part 3-8: Specifications for individual materials - Resins for cable accessories	EN IEC 60455-3-8	2021
IEC 60695-11-10	2013	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	2013
IEC 60814	1997	Insulating liquids - Oil-impregnated paper and pressboard - Determination of water by automatic coulometric Karl Fischer titration	EN 60814	1997
IEC 61033	1991	Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61099	2010	Insulating liquids - Specifications for unused synthetic organic esters for electrical purposes	EN 61099	2010
ISO 37	2011	Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties	-	-
ISO 62	2008	Plastics - Determination of water absorption	EN ISO 62	2008
ISO 75	series	Plastics and ebonite – Determination of temperature of deflection under load	EN ISO 75	series
ISO 175	2010	Plastics - Methods of test for the determination of the effects of immersion in liquid chemicals	EN ISO 175	2010
ISO 178	2010	Plastics - Determination of flexural properties	-	-
ISO 179-1	2010	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test	-	-
ISO 179-2	1997	Plastics - Determination of Charpy impact properties - Part 2: Instrumented impact test	-	-
ISO 291	-	Plastics - Standard atmospheres for conditioning and testing	EN ISO 291	-
ISO 306	2013	Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)	-	-
ISO 527	series	Plastics – Determination of tensile properties	EN ISO 527	series
ISO 584	1982	Plastics - Unsaturated polyester resins - Determination of reactivity at 80 degrees C (conventional method)	EN ISO 584	1997
ISO 604	2002	Plastics - Determination of compressive properties	EN ISO 604	2003
ISO 868	2003	Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)	EN ISO 868	2003
ISO 1183-1	2019	Plastics – Methods for determining the density of non-cellular plastics – Part 1: Immersion method, liquid pycnometer method and titration method	EN ISO 1183-1	2019
ISO 1513	2010	Paints and varnishes - Examination and preparation of test samples	EN ISO 1513	2010
ISO 1523	2002	Determination of flash point - Closed cup equilibrium method	EN ISO 1523	2002
ISO 1675	1985	Plastics - Liquid resins - Determination of density by the pycnometer method	-	-
ISO 2039-1	1993	Plastics - Determination of hardness - Part 1: Ball indentation method	-	-
ISO 2114	2000	Plastics (polyester resins) and paints and varnishes (binders) - Determination of partial acid value and total acid value	EN ISO 2114	2000
-	-		+ AC	2005

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 2431	1993	Paints and varnishes - Determination of flow time by use of flow cups	-	-
ISO 2535	1997	Plastics - Unsaturated polyester resins - Measurement of gel time at 25 degrees C	-	-
ISO 2554	1997	Plastics - Unsaturated polyester resins - Determination of hydroxyl value	EN ISO 2554	1998
ISO 2555	1989	Plastics - Resins in the liquid state or as emulsions or dispersions - Determination of apparent viscosity by the Brookfield test method	-	-
ISO 2592	1973	Petroleum products - Determination of flash and fire points - Cleveland open cup method	-	-
ISO 3001	1997	Plastics - Epoxide compounds - Determination of epoxide equivalent	-	-
ISO 3219	1993	Plastics - Polymers/resins in the liquid state or as emulsions or dispersions - Determination of viscosity using a rotational viscometer with defined shear rate	-	-
ISO 3451-1	1997	Plastics - Determination of ash - Part 1: General methods	-	-
ISO 3521	1997	Plastics - Unsaturated polyester and epoxy resins - Determination of overall volume shrinkage	EN ISO 3521	1999
ISO 3679	1983	Paints, varnishes, petroleum and related products; Determination of flashpoint; Rapid equilibrium method	-	-
ISO 4573	1978	Plastics - Epoxide resins and glycidyl esters - Determination of inorganic chlorine	-	-
ISO 4583	1998	Plastics - Epoxide resins and related materials - Determination of easily saponifiable chlorine	-	-
ISO 4615	1979	Plastics - Unsaturated polyesters and epoxide resins - Determination of total chlorine content	EN ISO 4615	1999
ISO 4625	1980	Binders for paints and varnishes - Determination of softening point - Ring-and-ball method	-	-
ISO 4895	-	Plastics - Liquid epoxy resins - Determination of tendency to crystallize	-	-
ISO 7056	-	Plastics laboratory ware - Beakers	-	-
ISO 9396	1997	Plastics - Phenolic resins - Determination of the gel time at a given temperature using automatic apparatus	EN ISO 9396	2000
ISO 11357-2	1999	Plastics - Differential scanning calorimetry (DSC) - Part 2: Determination of glass transition temperature	-	-
ISO 11359-2	1999	Plastics - Thermomechanical analysis (TMA) - Part 2: Determination of coefficient of linear thermal expansion and glass transition temperature	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 11359-3	2002	Plastics - Thermomechanical analysis (TMA) - Part 3: Determination of penetration temperature	-	-
ISO 14896	2009	Plastics – Polyurethane raw materials – Determination of isocyanate content	EN ISO 14896	2009
ISO 15528	2000	Paints, varnishes and raw materials for paints and varnishes - Sampling	-	-



INTERNATIONAL STANDARD

NORME INTERNATIONALE

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