UL 62841-2-4:2026

(IEC 62841-2-4:2014+AMD1:2025, MOD)

STANDARD FOR SAFETY

Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type

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UL Standard for Safety for Hand-Held Motor-Operated Electric Tools – Safety – Part 2-4: Particular Requirements for Sanders and Polishers Other Than Disk Type, UL 62841-2-4

First Edition, Dated November 30, 2015

Summary of Topics

This revision of ANSI/UL 62841-2-4 dated August 24, 2026 adopts the 2025 Amendment 1 of IEC 62841-2-4.

UL 62841-2-4 is an adoption of IEC 62841-2-4, First Edition, issued by the IEC June 2014, including Amendment 1 February 2025 and Corrigendum 1 October 2025. There are no technical national differences for this standard.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated April 24, 2026.

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CSA Group
CAN/CSA-C22.2 No. 62841-2-4:15
First Edition
(IEC 62841-2-4:2014, MOD)

ULSE Inc.
UL 62841-2-4
First Edition
(IEC 62841-2-4:2014+AMD1:2025, MOD)

Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type

November 30, 2015

(Title Page Reprinted: August 24, 2026)

This national standard is based on publication IEC 62841-2-4, First Edition (2014), Amendment 1 (2025) and Corrigendum 1 (2025).

ANSI/UL 62841-2-4-2026

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ISBN 978-1-4883-6143-2 © 2026 Canadian Standards Association

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Bibliography

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Preface

This is the harmonized CSA Group and ULSE Standard for Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type. It is the First edition of CAN/CSA-C22.2 No. 62841-2-4 and the First edition of UL 62841-2-4. This harmonized Standard has been jointly revised on August 24, 2026. For this purpose, CSA Group and ULSE are issuing revision pages dated August 24, 2026.

This harmonized standard is based on IEC Publication 62841-2-4: First edition Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type issued June 2014, as revised by Amendment 1 issued February 2025, and Corrigendum 1, Issued October 2025.

This harmonized standard was prepared by CSA Group and ULSE. The efforts and support of the International Harmonization Committee (IHC) for the adoption of the IEC series of standards for Hand-Held, Motor-Operated, and Transportable Tools and Lawn and Garden Machinery are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

This standard was reviewed by the CSA Subcommittee on Safety of Hand-Held Motor-Operated Electric Tools, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

CAN/CSA-C22.2 No. 62841-2-4 Standard for Safety for Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type is to be used in conjunction with the First edition of CAN/CSA-C22.2 No. 62841-1. The requirements for hand-held sanders and polishers other than disc type are contained in this Part 2-4 Standard and CAN/CSA-C22.2 No. 62841-1. Requirements of this Part 2-4 Standard, where stated, amend the requirements of CAN/CSA-C22.2 No. 62841-1. Where a particular subclause of CAN/CSA-C22.2 No. 62841-1 is not mentioned in CAN/CSA-C22.2 No. 62841-2-4, the CAN/CSA-C22.2 No. 62841-1 subclause applies.

UL Standard 62841-2-4 Standard for Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type, is to be used in conjunction with the First edition of UL 62841-1. The requirements for hand-held sanders and polishers other than disc type are contained in this Part 2-4 Standard and UL 62841-1. Requirements of this Part 2-4 Standard, where stated, amend the requirements of UL 62841-1. Where a particular subclause of UL 62841-1 is not mentioned in UL 62841-2-4, the UL 62841-1 subclause applies.

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Level of harmonization

This standard adopts the IEC text with editorial national differences.

This standard is published as an equivalent standard for CSA Group and ULSE.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and ULSE versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

Reasons for Differences From IEC

Differences from the IEC are being added in order to address safety and regulatory situations present in the US and Canada.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

IEC Copyright

For CSA Group, the text, figures, and tables of International Electrotechnical Commission Publication IEC 62841-2-4 Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type, copyright 2025, are used in this standard with the consent of the International Electrotechnical Commission. The IEC Foreword is not a part of the requirements of this standard but is included for information purposes only.

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NATIONAL DIFFERENCES

National Differences from the text of International Electrotechnical Commission (IEC) Publication 62841-2-4 (Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-4: Particular Requirements For Hand-Held Sanders And Polishers Other Than Disc Type) copyright 2025 are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

DR – These are National Differences based on the **national regulatory requirements**.

D1 – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

DC – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

DE – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

Addition / Add - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

Modification / Modify - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

Deletion / Delete - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

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FOREWORD

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY – PART 2-4: PARTICULAR REQUIREMENTS FOR HAND-HELD SANDERS AND POLISHERS OTHER THAN DISC TYPE

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.

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6) All users should ensure that they have the latest edition of this publication.

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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) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62841-2-4 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-4 is to be used in conjunction with the first edition of IEC 62841-1 (2014).

This Part 2-4 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held sanders and polishers other than disc type.

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Where a particular subclause of Part 1 is not mentioned in this Part 2-4, that subclause applies as far as reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

The following print types are used:

– requirements: in roman type

– *test specifications: in italic type;*

– notes: in smaller roman type

The terms defined in Clause 3 are printed in **bold typeface**.

Subclauses, notes and figures which are additional to those in Part 1 are numbered starting from 101.

A list of all parts of the IEC 62841 series, under the general title: *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be found on the IEC website.

The committee has decided that the contents of this document and its amendment 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, or

• revised.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 36 months from the date of publication.

The content of the corrigendum 1 (2025-10) has been included in this copy.

101DV DE *Modification: Add the following to the IEC Foreword:*

The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.

102DV DE *Modification: Add the following to the IEC Foreword:*

For this Standard, all references to “Part 1” refer to CAN/CSA-C22.2 No. 62841-1 and UL 62841-1.

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HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY – PART 2-4: PARTICULAR REQUIREMENTS FOR SANDERS AND POLISHERS OTHER THAN DISK TYPE

1 Scope

This clause of Part 1 is applicable, except as follows:

Addition:

This part of IEC 62841 applies to hand-held **sanders** and **polishers** with the exception of disc-type tools covered by IEC 62841-2-3.

Tools covered by this standard include but are not limited to **belt sanders**, **drum sanders** or **polishers**, **reciprocating sanders** or **polishers**, **orbital sanders** or **polishers**, and **random orbit sanders** or **polishers**.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable, except as follows:

Addition:

3.101 **sander**: tool intended to remove surface material using an abrasive medium

3.102 **polisher**: tool equipped with a disc or pad intended for polishing

3.103 **belt sander**: **sander** equipped with an endless abrasive belt

3.104 **drum sander or polisher**: **sander** or **polisher** equipped with a rotating cylindrical working surface, oriented either inline or at an angle with the motor axis

Note 1 to entry: **Drum polishers** are also known as burnishing machines.

Note 2 to entry: **Drum sanders** with a drum in line with the axis of the motor are also known as spindle sanders or inline sanders.

3.105 **orbital sander or polisher**: **sander** or **polisher** equipped with a plate, which performs an orbital oscillating motion parallel to the work surface

Note 1 to entry: Orbital sanders or polishers are also known as oscillating sanders or polishers

3.106 **random orbit sander or polisher**: **sander** or **polisher** equipped with a plate positioned eccentrically on the driving spindle which can rotate freely around its axis parallel to the work surface

3.107 **reciprocating sander or polisher**: **sander** or **polisher** equipped with a plate which performs a reciprocating motion parallel to the work surface

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4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable, except as follows:

5.17 *Addition:*

The mass of the tool includes the dust extraction adapter, if any.

6 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

7 Classification

This clause of Part 1 is applicable.

8 Marking and instructions

This clause of Part 1 is applicable, except as follows:

8.3 *Addition:*

For **belt sanders** and **drum sanders** and **polishers**, the direction of rotation shall be indicated on the tool by an arrow, raised or sunk, or by any other means no less visible and indelible.

8.14.1 *Addition:*

For **belt sanders** and **drum sanders**, the additional safety instructions as specified in 8.14.1.101 shall be given. This part may be printed separately from the "General Power Tool Safety Warnings".

8.14.1.101 **Belt sander and drum sander safety warnings**

Hold the power tool by insulated gripping surfaces, because the sanding surface may contact its own cord. *Cutting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.*

9 Protection against access to live parts

This clause of Part 1 is applicable.

10 Starting

This clause of Part 1 is applicable.

11 Input and current

This clause of Part 1 is applicable.

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