



UL 783

STANDARD FOR SAFETY

Electric Flashlights and Lanterns for
Use in Hazardous (Classified)
Locations

UL Standard for Safety for Electric Flashlights and Lanterns for Use in Hazardous (Classified) Locations, UL 783

Seventh Edition, Dated February 10, 2025

Summary of Topics

This new Seventh Edition of ANSI/UL 783 dated February 10, 2025 includes removing reference to ISA MC 96.1, [30.8](#). This new edition also incorporates editorial changes including renumbering and reformatting to align with current style.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated January 3, 2025.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of ULSE Inc. (ULSE).

ULSE provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will ULSE be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if ULSE or an authorized ULSE representative has been advised of the possibility of such damage. In no event shall ULSE's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold ULSE harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

No Text on This Page

FEBRUARY 10, 2025

1

UL 783

**Standard for Electric Flashlights and Lanterns for Use in Hazardous
(Classified) Locations**

The first through fourth editions were titled "Electric Flashlights and Lanterns for Use in Hazardous Locations, Class I, Groups C and D."

First Edition – May, 1965
Second Edition – January, 1971
Third Edition – April, 1979
Fourth Edition – November, 1983
Fifth Edition – July, 1993
Sixth Edition – April, 2003

Seventh Edition

February 10, 2025

This ANSI/UL Standard for Safety consists of the Seventh Edition.

The most recent designation of ANSI/UL 783 as an American National Standard (ANSI) occurred on February 10, 2025 ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

The Department of Defense (DoD) has adopted UL 783 on December 13, 1983. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

Our Standards for Safety are copyrighted by ULSE Inc. Neither a printed nor electronic copy of a Standard should be altered in any way. All of our Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of ULSE Inc.

© 2025 ULSE Inc. All rights reserved.

No Text on This Page

CONTENTS

PART 1 – GENERAL REQUIREMENTS

INTRODUCTION

1	Scope	5
2	General	5
3	Units of Measurement	6
4	Referenced Publications	6
5	Class I, Zone, and Group Equivalency	6
5.1	Class I, Zone 1, Group IIA	6
5.2	Class I, Zone 1, Group IIB	6
5.3	Class I, Zone 1, Group IIC	6
5.4	Class I, Zone 2, Group IIA	6
5.5	Class I, Zone 2, Group IIB	6
5.6	Class I, Zone 2, Group IIC	7
6	Glossary	7

CONSTRUCTION

7	Enclosure	7
8	Protection Against Corrosion	7
9	Cells and Batteries	8
10	Internal Conductors	8

MARKING

11	Details	8
----	---------------	---

PART II – DIVISION 1 FLASHLIGHTS WITH LAMP DISCONNECT MECHANISMS – SPECIFIC REQUIREMENTS

CONSTRUCTION

12	Filament Disconnect Mechanism	10
----	-------------------------------------	----

PERFORMANCE

13	Lamp Bulb Breakage Tests	11
14	Spark Ignition Test	11
15	Temperature Tests	11
16	Test on Nonmetallic Filament Disconnect Mechanism	11
17	Drop Test	12

PART III – DIVISION 1 FLASHLIGHTS WITHOUT LAMP DISCONNECT MECHANISMS – SPECIFIC REQUIREMENTS

CONSTRUCTION

18	General	12
----	---------------	----

PERFORMANCE

19	Spark-Ignition Test.....	12
20	Temperature Tests.....	12
21	Mechanical Tests.....	12
	21.1 General.....	12
	21.2 Impact test	12
	21.3 30-foot drop test	13

PART IV – FLASHLIGHTS AND LANTERNS FOR USE IN DIVISION 2 LOCATIONS – SPECIFIC REQUIREMENTS**CONSTRUCTION**

22	General	13
----	---------------	----

PERFORMANCE

23	Spark-Ignition Test.....	13
24	Temperature Test	13
25	Drop Test.....	14
26	Dust-Tight Enclosure Test	14

PART V – PERFORMANCE**TESTS**

27	Lamp Bulb Breakage Test	14
28	Spark-Ignition Tests	15
	28.1 General.....	15
	28.2 Test apparatus.....	15
	28.3 Gas mixtures	15
	28.4 Verification of spark test apparatus.....	16
29	Test on Nonmetallic Filament Disconnect Mechanism	16
30	Temperature Tests.....	17
31	Grain Dust Temperature Test.....	17
32	30-Foot Drop Test.....	17
33	3-Foot Drop Test	18
34	Impact Test	18
35	Thermal Endurance to Heat	18
36	Thermal Endurance to Cold.....	18
37	Dust-Tight Enclosure Test (Atomized Water Spray)	18
38	Battery Output Test.....	19