



UL 120101

STANDARD FOR SAFETY

Definitions and Information Pertaining
to Electrical Equipment in Hazardous
Locations

UL Standard for Safety for Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations, UL 120101

First Edition, Dated December 3, 2019

Summary of Topics

This First edition of ANSI/UL 120101 is an Adoption of ANSI/ISA-12.01.01, Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations.

The requirements are substantially in accordance with Proposal(s) on this subject dated October 26, 2018 and August 16, 2019.

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DECEMBER 3, 2019



ANSI/UL 120101-2019

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Standard for Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations

First Edition

December 3, 2019

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

The most recent designation of ANSI/UL 120101 as an American National Standard (ANSI) occurred on December 3, 2019. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

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Preface (UL)

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1 Purpose

1.1 This document provides definitions and information pertaining to protection techniques, terminology, and the installation of electrical equipment in hazardous (classified) locations and provides an introduction and basic background to the UL Standards Technical Panel (STP) 60079, Electrical Equipment for Hazardous (Classified) Locations, series of publications and committee activities.

1.2 This document provides a general review of applicable codes and standards, and it should not be used in lieu of those codes and standards for equipment design, manufacture, installation, maintenance and test criteria.

2 Scope

2.1 This document provides general guidance for safe design, installation, and maintenance of electrical equipment in hazardous (classified) locations using appropriate means to prevent ignition of flammable gases and vapors, flammable liquids, combustible dusts, or ignitable fibers or flyings.

2.2 This document covers only locations made hazardous, or potentially hazardous, due to the presence of flammable gases or vapors, flammable liquids, combustible dusts, or ignitable fibers or flyings. The document is not necessarily relevant to the hazards posed by pyrophoric materials, explosives or propellants containing their own oxidizers.

2.3 This document is concerned only with design, manufacture, installation, maintenance, and test criteria related to arcs, sparks, or hot surfaces produced by electrical and non-electrical* equipment that may cause ignition of flammable gas or vapor-in-air mixtures, clouds or blankets of combustible dust, or easily ignitable fibers or flyings. Equipment is also required to comply with the applicable ordinary location requirements (e.g., UL 508 and UL 61010-1) either by direct reference in hazardous locations standards or by other regulations.

* Under development (Mechanical and ESD for example). Some equipment may produce static electricity or cause high temperatures or sparks due to mechanical failure. The materials of construction of parts in such equipment will be an important consideration for application in hazardous locations.

2.4 This document does not cover mechanisms of ignition from external sources, such as static electricity or lightning. Some equipment may produce static electricity. The materials of construction of parts in such equipment will be an important consideration for application in hazardous locations. The extra precautions necessary for this are beyond the scope of this document.

2.5 This document does not consider the effects of installation in corrosive atmospheres and the resulting deleterious conditions to the original design integrity of the equipment. The additional precautions necessary for these conditions are outside the scope of this document.

2.6 This document is not an instruction manual. However, it is intended to provide introductory guidance to those involved with the design, manufacture, installation, and maintenance of equipment used in hazardous (classified) locations. It is also intended to promote uniformity of practice among those skilled in the art. Nothing contained in this document is to be construed as a fixed rule without regard to sound engineering judgment.

2.7 For hazardous location equipment, atmospheric conditions are generally considered to be:

- a) an ambient temperature range of -20 °C (-4 °F) to 40 °C (104 °F) for zones and to -25 °C (-13 °F) to +40 °C (104 °F) for divisions;
- b) air with normal oxygen content, typically 21 percent by volume; and