MAURITIAN STANDARD

MS ISO 817:2014

+ Amendment 1:2017

First edition
2018-09-29

Refrigerant – Designation and safety classification

PREVIEW

ICS 71.100.45

Mauritius Standards Bureau
Moka

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National foreword

This Mauritian Standard is identical with the International Standard **ISO 817:2014 + A1:2017**, *Refrigerants – Designation and safety classification*. It was adopted by the Mauritius Standards Bureau on the recommendation of the **Environmental Management Standards Committee** and approval of the **Standards Council** on 31 August 2018. It was notified in the Government Gazette on **29 September 2018***

For the purpose of this standard the following changes should be made:

(i) the words 'International Standard' should be replaced by 'Mauritian Standard';

(ii) the 'decimal comma' should be replaced by 'decimal point'.

***General Notice No. 1400 of 2018.**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 86, *Refrigeration and air-conditioning*, Subcommittee SC 8, *Refrigerants and refrigeration lubricants*.

This third edition cancels and replaces the second edition (ISO 817:2005), which has been technically revised.

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Introduction

This third edition has been technically revised by the addition of new refrigerant designations and a safety classification system based on toxicity and flammability data.

The safety classifications in this International Standard do not consider decomposition products or by-products of combustion. Product and system safety standards (e.g. ISO 5149, IEC 60335-2-24, IEC 60335-2-34, IEC 60335-2-40 and IEC 60335-2-89) address the prevention of ignition of refrigerant based on the characteristics provided in this International Standard.

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Refrigerants — Designation and safety classification

1 Scope

This International Standard provides an unambiguous system for assigning designations to refrigerants. It also establishes a system for assigning a safety classification to refrigerants based on toxicity and flammability data, and provides a means of determining the refrigerant concentration limit. Tables listing the refrigerant designations, safety classifications and the refrigerant concentration limits are included based on data made available.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable to its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI/ASHRAE Standard 34, *Designation and Safety Classification of Refrigerants*

ASTM E681, *Standard Test Method for Concentration Limits of Flammability of Chemicals (Vapours and Gases)*

3 Terms, definitions, abbreviated terms and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
acute toxicity
adverse health effect(s) from a single, short-term exposure

3.1.2
acute-toxicity exposure limit
ATEL
maximum recommended refrigerant concentration determined in accordance with the established systems and intended to reduce the risks of acute toxicity hazards to humans in the event of a refrigerant release

Note 1 to entry: The systems are specified in this International Standard.

3.1.3
anaesthetic effect
impairment of the ability to perceive pain and other sensory stimulation

3.1.4
approximate lethal concentration
ALC
concentration of a refrigerant that is lethal to even a single test animal but to less than 50 % of the animals in that group when tested by the same conditions as for an LC_{50} test

3.1.5
azeotrope
blend composed of two or more refrigerants whose equilibrium vapour and liquid phase compositions are the same at a specific pressure, but may be different at other conditions

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