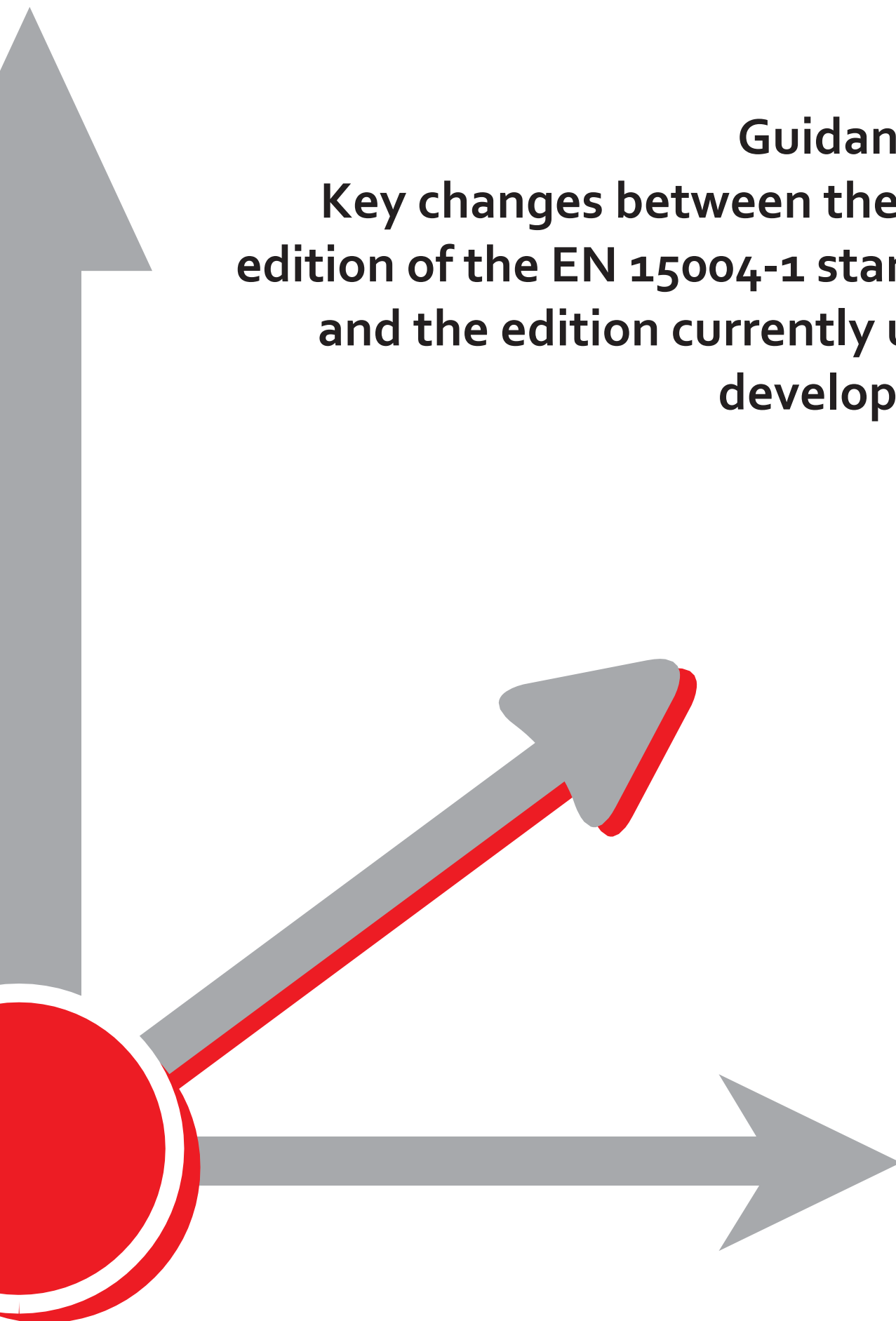


**Guidance on
Key changes between the 2019
edition of the EN 15004-1 standard
and the edition currently under
development**



Revision table

Date	Rev #	Paragraph / Page	Change
May 2023	1.0	-	First release

FOREWORD

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1. INTRODUCTION

This Euralarm guidance document provides information on the key changes between EN 15004-1: 2019 and the next edition is expected to be published in 2023.

EN 15004-1 since its initial publication in 2008, has been largely based on ISO 14520-1 and in 2022, ISO 14520-1 was submitted for FDIS (the final stage before publication), and received a unanimous ballot in favour of publication.

CEN has agreed to accept the text of the ISO 14520-1 as the basis of a revision to EN 15004-1 and this guidance identifies the key changes that are expected to appear in the revised EN 15004-1.

The changes detailed below, while are designed to provide guidance on the revision to EN 15004-1, they are changes that follow exactly the amendments/additions made in ISO 14520-1.

2. KEY CHANGES

2.1 Safety Information

It was agreed in the ISO sub-committee SC8, that impurities could be present within the allowable impurities given in the agent specifications and these needed to be identified.

As such, upper limits for any impurities that could result in acute toxicities at concentrations below the NOAEL are to be given. The actual threshold levels will appear in the specific agent parts, but the requirement to identify these impurities is within EN 15004-1, clause 5.2.1.

2.2 Actuator placement indication

Concern has been raised that in the event that an electrical actuator is physically removed from a container valve or selector valve, that there was no requirement for this to be signaled, meaning that the end user may not be made aware.

It has been agreed to require that in the event an electrical actuator is removed from an agent container valve or selector valve, an audible and visual alarm is provided at the control panel. This is contained in a new clause 6.4.4.2, of EN 15004-1.

2.3 Enclosure pressure venting

The subject of over/under pressure venting of enclosures protected by gaseous fire extinguishing systems has been addressed in the standards, however in the EN 15004-1: 2019 edition, no methodology was offered on how to calculate the requirements.

Since the 2019 edition, EN ISO 21805, Guidance on design, selection and installation of vents to safeguard the structural integrity of enclosures protected by gaseous fire extinguishing systems, has been published.

Clause 7.4.1 of EN 15004-1 now refers specifically to EN ISO 21805.

2.4 Effects of noise in sensitive areas

During recent years, there have been a number of high profile incidents caused by the operation of gaseous fire extinguishing systems, which have resulted in damage to computer hard drives and/or loss of data, caused by noise.

A new clause 7.5, in EN 15004-1, draws attention to the 'effects of noise' and offers guidance on how the hazards can be reduced.

2.5 Hazard classification clarification

The EN 15004-1 provides requirements to assess whether a Class A hazard should be treated as regular Class A or may contain certain high hazard materials or a scenario justifying a higher design concentration.

As some enclosures may contain a mix of regular and high hazard, and that may have re-circulating air it was unclear to some readers, as to when the regular or high hazards concentrations should be employed.

To help clarify how and when the regular and high concentrations should be used, additional guidance has been added to clause 7.6.1.3. of EN 15004-1

2.6 Scaling factors

ISO TS 12854 contained advice on the use of scaling factors for Class B fuels (other than heptane). The revision of ISO 14520-1 has incorporated these requirements. ISO TS 12854 has been withdrawn.

The advice previously contained in ISO TS 12854 will be incorporated as informative Annex I in EN 15004-1.

2.7 New agent evaluation criteria

ISO TR 23107 contains a set of requirements to be supplied when a new agent is submitted for inclusion in the ISO 14520 series.

As the Technical Specification is considered to contain important information, it has been agreed to move this into the standard and withdraw ISO TR 23107.

The advice contained in ISO TR 23107 will be incorporated as normative Annex J in EN 15004-1.

3. SUMMARY

The Euralarm Extinguishing Section believes the changes to EN 15004-1 are important enhancements and welcomes the improvements to the safety and efficacy of gaseous fire extinguishing systems that will arise from the revision to EN 15004-1.

Publication date: May 2023

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