Technical Report

ISO/TR 20180

Risk-based product quality data interchange in e-commerce

Échange de données sur la qualité des produits selon une approche fondée sur les risques dans le commerce en ligne

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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 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The exponential growth of e-commerce presents new challenges for stakeholders regarding consumer product safety. Unsafe products make their way to the market, because customs and market surveillance authorities worldwide are understaffed compared to the high volume of parcels crossing borders daily. E-commerce platforms and sellers, especially small and medium-sized enterprises (SMEs), face challenges in complying with legal safety rules across multiple markets due to complex, globally-sourced supply chains. This increases the need for effective data exchange among stakeholders.

In order to protect consumers from unsafe products, it is critical for platform operators to enhance their checks to prevent unsafe products from being offered to consumers online. Similarly, it is crucial for sellers to provide evidence of compliance with safety and other legal requirements as a condition before products are listed online. Relevant government agencies encourage the advanced exchange of e-commerce specific information (e.g. product compliance and quality data) to maintain a balance between facilitating time-sensitive e-commerce and ensuring efficient controls for product safety. Proper product quality data, therefore, can be obtained at the earliest point in the supply chain and incrementally added and exchanged in time by relevant parties along the supply chain in e-commerce.

For efficient exchange of these data, a top priority is to decide the minimum data needed based on product risk level. Applying a risk-based compliance method to differentiate between low-risk and high-risk e-commerce trade enables interchange of more targeted data – ensuring data exchange is proportionate to risk. It is also important for all stakeholders in e-commerce to have a common understanding of the description and structuring of the data, and its relation to existing international standards.

This document is intended for e-commerce operators, relevant service providers, authorities and the other stakeholders.

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Risk-based product quality data interchange in e-commerce

1 Scope

This document provides information on how to address product quality data interchange based on risk assessment for consumer product safety in e-commerce. This document:

— analyses e-commerce supply chain context;

— analyses product risk assessment in e-commerce;

— gives use cases on risk-based product quality data for interchange;

— presents the general process for product quality data interchange among e-commerce stakeholders.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
risk
effect of uncertainty on objectives

Note 1 to entry: An effect is a deviation from the expected. It can be positive, negative or both, and can address, create or result in opportunities and threats.

Note 2 to entry: Objectives can have different aspects and categories, and they can be applied at different levels.

[SOURCE: ISO 31000:2018, 3.1, modified — Note 3 to entry was removed.]

3.2
consumer product
product designed and produced primarily for, but not limited to, personal use, including its components, parts, accessories, instructions and packaging

[SOURCE: ISO 10377:2013, 2.2]

3.3
risk factor
characteristic or circumstance which can contribute to, or cause, consumer vulnerability

[SOURCE: ISO 22458:2022, 3.9]

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3.4
risk source
element which alone or in combination has the potential to give rise to *risk* (3.1)

[SOURCE: ISO 31000:2018, 3.4]

3.5
hazard
potential source of harm

Note 1 to entry: Adapted from ISO 31073:2022, 3.3.12.

3.6
level of risk
assessed magnitude of the *risk* (3.1)

Note 1 to entry: Adapted from ISO 31073:2022, 3.3.22.

3.7
e-commerce operator
individual or organization engaged in e-commerce

[SOURCE: ISO 32110:2023, 3.2.6, modified — Note 1 to entry was removed.]

3.8
e-commerce platform operator
organization that operates an e-commerce platform

[SOURCE: ISO 32110:2023, 3.2.7]

3.9
seller
individual or organization that sells products over open networks

[SOURCE: ISO 32110:2023, 3.2.13, modified — Notes 1 and 2 to entry were removed.]

3.10
stakeholder
person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity

Note 1 to entry: The term "interested party" can be used as an alternative to "stakeholder".

[SOURCE: ISO 31000:2018, 3.3]

4 E-commerce supply chain context

4.1 Overview

E-commerce supply chain involves complex business processes covering stages from upstream supply to after-sales and web of stakeholders, all of which can be sources of consumer product quality risk. To help reduce these risks, it is essential to assess the risk level in the context of e-commerce supply chain and enable the stakeholders to obtain sufficient quality data to ensure consumer product safety. Two key considerations are the major participants involved in quality data interchange and the key e-commerce business stages.

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