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NSAI Standards

Irish Standard
I.S. EN 12012-4:2019+A1:2021

Plastics and rubber machines - Size reduction machines - Part 4: Safety requirements for agglomerators

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National Foreword

I.S. EN 12012-4:2019+A1:2021 is the adopted Irish version of the European Document EN 12012-4:2019+A1:2021, Plastics and rubber machines - Size reduction machines - Part 4: Safety requirements for agglomerators

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12012-4:2019+A1

October 2021

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Supersedes EN 12012-4:2019

English Version

Plastics and rubber machines - Size reduction machines - Part 4: Safety requirements for agglomerators

Machines pour les matières plastiques et le caoutchouc - Machines à fragmenter - Partie 4 : Prescriptions de sécurité relatives aux agglomérateurs

Kunststoff- und Gummimaschinen - Zerkleinerungsmaschinen - Teil 4: Sicherheitsanforderungen für Agglomeratoren

This European Standard was approved by CEN on 29 April 2019 and includes Amendment 1 approved by CEN on 3 August 2021.

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European foreword

This document (EN 12012-4:2019+A1:2021) has been prepared by Technical Committee CEN/TC 145 “Plastics and rubber machines”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes [A1⟩ EN 12012-4:2019 ⟨A1].

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1⟩ ⟨A1].

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

The main changes compared to the EN 12012-4:2006+A1:2008 are:

— the revision of type-A and type-B standards have been considered;

— the list of significant hazards has been moved to an informative annex;

— the performance levels/safety integrity levels of safety related parts of control systems have been specified in accordance with EN ISO 13849-1:2015 / EN 62061:2005, EN 62061:2005/A1:2013, EN 62061:2005/A2:2015;

— the hazards related to the ejection of parts or materials from the agglomerator chamber have been removed because reliable and well-designed chambers represent now the state of the art (no projections and no broken chamber have been reported for a long time);

— feed openings of big dimensions are considered;

— requirements for moving parts of discharge systems are added;

[A1⟩ — the agglomerators with actuators moved by pneumatic and/or hydraulic energy have been excluded from the Scope; ⟨A1]

— the annex for noise measurement has been revised.

[A1⟩ In comparison with the original version EN 12012-4:2019, the following technical and editorial modifications have been made by amendment EN 12012-4:2019/A1:2021:

— European Foreword: dash added;

— Scope: editorial modification and dash added;

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— Normative references: a reference date updated;

— 4.2.1: updated normative references;

— 4.2.3: updated normative reference;

— 4.6.1.3: modified text;

— 4.6.1.4: modified text;

— 4.7.2: modified text;

— 4.7.3: updated normative reference;

— 6.2.1: modified text;

— 6.3.2: modified text;

— Table Annex ZA: modified text. A1

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document is a type-C standard as stated in EN ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

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1 Scope

[A1] This document deals with all significant hazards, hazardous situations and events relevant to agglomerators for the modification of plastic scraps in its form, size and flow characteristics, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex A). The hazards have been identified taking into account all phases of the machine life cycle according to EN ISO 12100:2010, 5.4.

Machines considered in this document begin at the outer edge of the feed opening and end at the outer edge of the discharge opening.

This document does not deal with:

— hazards due to emissions by processing materials that could be hazardous to health;

— hazards caused by ignition of flammable residues in material to be processed;

— requirements for exhaust ventilation systems;

— agglomerators moved by pneumatic and/or hydraulic energy.

This document is not applicable to agglomerators manufactured before the date of its publication. [A1]

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 14118:2018, *Safety of machinery — Prevention of unexpected start-up (ISO 14118:2017)*

EN 60204-1:2018, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2016, modified)*

EN 62061:2005, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005)*

EN 62061:2005/A1:2013, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005/AMD1:2012)*

EN 62061:2005/A2:2015, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005/AMD2:2015)*

EN ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:2010)*

EN ISO 4871:2009, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

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