

## საქართველოს სტანდარტი

---

მოწყობილობები პლასტმასისა და რეზინებისთვის - შიდა ნაერთები -  
უსაფრთხოების მოთხოვნები

საქართველოს სტანდარტებისა და მეტროლოგიის  
ეროვნული სააგენტო  
თბილისი

საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ

2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს 2019 წლის 22 აგვისტოს № 46 განკარგულებით

3 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 12013:2000+A1:2008 „ მოწყობილობები პლასტმასისა და რეზინებისთვის - შიდა ნაერთები - უსაფრთხოების მოთხოვნები“

4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2019 წლის 22 აგვისტო №268-1.3-014916

დაუშვებელია წინამდებარე სტანდარტის სრული ან ნაწილობრივი კვლავწარმოება, ტირაჟირება და გავრცელება სსიპ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

EUROPEAN STANDARD

**EN 12013:2000+A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2008

ICS 83.200

Supersedes EN 12013:2000

English Version

## Plastics and rubber machines - Internal mixers - Safety requirements

Machines pour les matières plastiques et le caoutchouc -  
Mélangeurs internes - Prescriptions de sécurité

Kunststoff- und Gummimaschinen - Innenmischer -  
Sicherheitsanforderungen

This European Standard was approved by CEN on 25 May 2000 and includes Amendment 1 approved by CEN on 8 June 2008.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

**Contents**

Page

Foreword.....3

Introduction .....4

1 Scope .....4

2 Normative references .....4

3 Definitions .....6

4 List of hazards.....8

5 Safety requirements and/or measures .....20

6 Verification of safety requirements and/or measures.....31

7 Information for use .....33

Annex A (informative) **Examples of possible technical measures to prevent fire hazards in the case where certain exothermically reacting compounds cannot be released from the mixing chamber in the event of a power failure** .....36

Annex ZA (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC** .....37

Annex ZB (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC** .....38

საინფორმაციო ნაწილი. სრული ტექსტის სახსრად შეიძინეთ სტანდარტი.

## Foreword

This document (EN 12013:2000+A1:2008) has been prepared by Technical Committee CEN/TC 145 "Plastics and rubber machines", the secretariat of which is held by UNI.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-06-08. The main changes compared to the previous version are:

- Modification of the main element of the title.
- Editorial modification of Annex ZA.
- Addition of Annex ZB.
- Editorial changes of EN 292-1:1991 to EN ISO 12100-1:2003 and of EN 292-2:1991 to EN ISO 12100-2:2003 in the following clauses: Introduction, 2, 5, 5.1.8, 5.4, Table 1, 7.1.
- Minor changes in clause: Foreword, 7th paragraph and in sub-clauses: 7.1.4, third indent; 7.2, second and third indents.

This document supersedes EN 12013:2000.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** and **A1**.

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

**A1** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

This European standard is a type C Standard as defined in <sup>A1</sup> EN ISO 12100 <sup>A1</sup> and has been elaborated by CEN/TC 145/WG7.

The extent to which hazards are covered is indicated in the scope of this standard. In addition, machinery shall comply as appropriate with <sup>A1</sup> EN ISO 12100 <sup>A1</sup> for hazards which are not covered by this standard.

## 1 Scope

This standard applies to internal mixers for rubber and plastics as defined in 3.1. The safety requirements and/or measures specified in this standard apply to all internal mixers irrespective of their size and irrespective of the control modes of the hopper front door and discharge door.

The safety requirements for the design of exhaust systems and ancillary equipment are not covered by this standard.

The safety requirements for the interaction between internal mixers and ancillary equipment are specified.

This standard covers the significant hazards listed in Clause 4.

This standard is not applicable to internal mixers which are manufactured before the date of publication of this standard by CEN.

## 2 Normative references

This European standard incorporates provisions from other publications by dated or undated references. These normative references are cited at the appropriate places in the text and the publications are listed below. For dated references, subsequent amendments or revisions of these publications apply to the European standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

<sup>A1</sup> *deleted text* <sup>A1</sup>

EN 294:1992, *Safety of Machinery- Safety distances to prevent danger zones being reached by the upper limbs*

EN 418:1992, *Safety of Machinery - Emergency stop equipment, functional aspects - Principles for design*

EN 563, *Safety of Machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces*

EN 574:1996, *Safety of Machinery - Two-hand control devices - Functional aspects - Principles for design*

EN 811, *Safety of Machinery - Safety distances to prevent danger zones being reached by the lower limbs*

EN 953:1997, *Safety of Machinery - Guards - General requirements for the design and construction of fixed and moveable guards*

EN 954-1:1996, *Safety of Machinery - Safety-related parts of control systems - Part 1: General principles for design*

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.