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EUROPEAN STANDARD

EN 71-5:1993

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Descriptors: Toys, games, chemical compounds, safety requirements, accident prevention, dangerous material, approved doses, specifications, packing, marking

English version

Safety of toys - Part 5: Chemical toys (sets) other than experimental sets

Sécurité des jouets - Partie 5: Jeux chimiques (coffrets) autres que les coffrets d'expériences chimiques

Sicherheit von Spielzeug - Teil 5: Chemisches Spielzeug (Sets) ausgenommen Experimentierkästen

This European Standard was approved by CEN on 1993-05-14. 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 Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard was drawn up by the Technical Committee CEN/TC 52/WG 5 "Safety of toys - Chemical toys", the secretariat of which is held by DS.

This standard was submitted for the second Formal Vote, and the result was positive.

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

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of an identical text or by endorsement, at the latest by November 1993, and conflicting national standards shall be withdrawn at the latest by November 1993.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

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INTRODUCTION

This European Standard for Safety of Toys consists of the following parts:

- Part 1: Mechanical and physical properties
- Part 2: Flammability
- Part 3: Migration of certain elements
- Part 4: Experimental sets for chemistry and related activities
- Part 5: Chemical toys (sets) other than experimental sets

This standard is Part 5 of the European Standard for safety of toys, EN 71.

This Part should be read in conjunction with Parts 1, 2 and 3, particularly the introduction and clause 1 of Part 1.

It is intended to reduce the risks which may present health hazards to a child when the chemical toys are used as intended or in a foreseeable way, bearing in mind the normal behaviour of children.

When using these chemical toys, potential risks should be kept to a minimum by inclusion of appropriate information to give special attention to possible hazards, risks and other problems.

This Part of EN 71 specifies requirements for chemical toys (sets) other than experimental sets. Differing legal requirements, e.g. for classification of dangerous substances, risk/safety phrases, labelling and limits for substances, exist in EFTA countries.

Chemical Abstract Service Registry Number (CAS) and European Inventory of Existing Chemical Substances Number (EINECS) given in tables 1 to 15 are provided for information purposes only.

Test methods to determine the migration of elements not covered by EN 71 part 3 are being developed and will be added at the earliest opportunity.

A method for the preparation of the materials to perform the migration test will be developed.

Methods for the determination of the emission of toluene, xylene and benzene in oven hardening plasticized PVC modelling clay sets and plastic moulding sets are in preparation. When these test methods have been established, requirements and methods of test will be included.

Methods for the determination of specific volatile substances in clause 9 are in preparation. When these methods have been established, methods of test will be included.

A test method for the determination of styrene in plastic moulding sets is in preparation.

Requirements and test methods for modifiers, resins and fillers are in preparation and will be added to this standard at the earliest opportunity.

Safety of toys

Part 5: Chemical toys (sets) other than experimental sets

1 Scope

This Part of EN 71 specifies requirements for the substances and materials used in chemical toys (sets) other than experimental sets. It specifies:

- the maximum amounts of substances and preparations classified as dangerous by the definitions in Directives 67/548/EEC^{*} (with subsequent amendments and adaptations) and 88/379/EEC^{*} (with subsequent amendments and adaptations); and
- the maximum amounts of substances and preparations which in excessive amounts may harm the health of children using them and which are not covered by the above mentioned Directives; and
- the maximum amounts for other substances or preparations delivered with the toy.

Additionally, requirements are specified for markings, warnings, safety rules, contents list, instructions for use and first aid information.

This Part of EN 71 applies to:

- plaster of Paris (gypsum) moulding sets;
- ceramic and vitreous enamelling materials supplied in miniature workshop sets;
- oven hardening plasticized PVC modelling clay sets;
- plastic moulding sets;
- embedding sets;
- photographic developing sets;
- adhesives, paints, lacquers, varnishes, thinners and cleaning agents (solvents), supplied or recommended in model sets.

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2 Normative references

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

^{*}) Differing legal requirements may exist in non-EC countries.

EN 71-1 Safety of toys - Part 1: Mechanical and physical properties

EN 71-2 Safety of toys - Part 2: Flammability

EN 71-3 Safety of toys - Part 3: Migration of certain elements

ISO 3696:1987 Water for analytical laboratory use. Specification and test methods

European Council Directive 64/54/EEC¹⁾ - Preservatives authorized for use in foodstuffs intended for human consumption (with subsequent amendments and adaptations).¹⁾

European Council Directive 67/548/EEC²⁾ - Classification, packaging and labelling of dangerous substances (with subsequent amendments and adaptations).²⁾

European Council Directive 76/768/EEC³⁾ - Cosmetic products (with subsequent amendments and adaptations).³⁾

European Council Directive 78/142/EEC⁴⁾ - Material and articles which contain vinyl chloride monomer and are intended to come into contact with foodstuffs (with subsequent amendments and adaptations).⁴⁾

European Council Directive 88/379/EEC⁵⁾ - Classification, packaging and labelling of dangerous preparations (with subsequent amendments and adaptations).⁵⁾

European Council Directive 90/128/EEC⁶⁾ - Plastics materials and articles intended to come into contact with foodstuffs (with subsequent amendments and adaptations).⁶⁾

European Commission Directive 91/442/EEC⁷⁾ - Dangerous preparations the packaging of which must be fitted with child-resistant fastenings (with subsequent amendments and adaptations).⁷⁾

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- 1) At present the following amendments and adaptations exist: 67/427/EEC¹⁾, 68/420/EEC¹⁾, 70/359/EEC¹⁾, 71/160/EEC¹⁾, 72/444/EEC¹⁾, 74/62/EEC¹⁾, 74/394/EEC¹⁾, 76/462/EEC¹⁾, 76/629/EEC¹⁾, 78/145/EEC¹⁾, 79/40/EEC¹⁾, 81/214/EEC¹⁾, 83/585/EEC¹⁾, 83/636/EEC¹⁾, 84/86/EEC¹⁾, 84/223/EEC¹⁾, 84/261/EEC¹⁾, 84/458/EEC¹⁾, 85/7/EEC¹⁾, 85/172/EEC¹⁾, 85/585/EEC¹⁾.
- 2) At present the following amendments and adaptations exist: 69/81/EEC²⁾, 70/89/EEC²⁾, 71/144/EEC²⁾, 73/146/EEC²⁾, 75/409/EEC²⁾, 76/907/EEC²⁾, 79/370/EEC²⁾, 79/831/EEC²⁾, 81/957/EEC²⁾, 82/232/EEC²⁾, 83/467/EEC²⁾, 84/449/EEC²⁾, 86/431/EEC²⁾, 87/432/EEC²⁾, 88/302/EEC²⁾, 88/490/EEC²⁾, 90/517/EEC²⁾, 91/325/EEC²⁾, 91/326/EEC²⁾, 91/410/EEC²⁾, 91/632/EEC²⁾, 92/32/EEC²⁾, 92/37/EEC²⁾.
- 3) At present the following amendments and adaptations exist: 79/661/EEC³⁾, 82/147/EEC³⁾, 82/368/EEC³⁾, 83/191/EEC³⁾, 83/341/EEC³⁾, 83/496/EEC³⁾, 83/574/EEC³⁾, 84/415/EEC³⁾, 85/391/EEC³⁾, 86/179/EEC³⁾, 86/199/EEC³⁾, 87/137/EEC³⁾, 88/233/EEC³⁾, 88/667/EEC³⁾, 89/174/EEC³⁾, 89/679/EEC³⁾, 90/121/EEC³⁾, 91/184/EEC³⁾, 92/8/EEC³⁾.
- 4) At present the following amendments and adaptations exist: 83/341/EEC⁴⁾, 83/496/EEC⁴⁾, 83/574/EEC⁴⁾, 84/415/EEC⁴⁾, 85/391/EEC⁴⁾, 86/179/EEC⁴⁾, 86/199/EEC⁴⁾, 87/137/EEC⁴⁾, 88/233/EEC⁴⁾, 88/667/EEC⁴⁾, 89/679/EEC⁴⁾, 90/128/EEC⁴⁾.
- 5) At present the following amendments and adaptations exist: 89/178/EEC⁵⁾, 90/492/EEC⁵⁾, 92/32/EEC⁵⁾.
- 6) At present the following amendments and adaptations exist: 92/39/EEC⁶⁾.
- 7) At present the following amendments and adaptations exist: None.

*) Differing legal requirements may exist in non-EC countries.

3 DEFINITIONS

For the purpose of this Part of EN 71 the following definitions apply:

3.1 plaster of Paris (gypsum) moulding set: A toy containing moulds into which a mixture of water and gypsum (predominantly calcium sulfate hemihydrate $\text{CaSO}_4 \cdot 0,5 \text{H}_2\text{O}$) is poured and allowed to harden, e.g. for preparing figures and plates.

3.2 ceramic and vitreous enamelling materials supplied in miniature workshop set: A toy containing ceramic glazes and vitreous enamels (transparent, opaque or coloured) which after addition of water are painted on ceramic and metallic bodies to obtain smooth coatings, whereafter it is dried and fired at temperatures above 700 °C.

3.3 oven hardening plasticized PVC-modelling clay set: A toy to be used for creating all kinds of figures, brooches, fashion jewellery etc. prepared by hardening in the oven at temperatures between 100°C and 130°C.

3.4 plastic moulding set: A toy to be used in substitution of ceramic materials to create decorative articles or models by fusion of a polymer by heating in an oven up to a maximum of 180 °C.

3.5 embedding set: A toy to be used to preserve certain products in a transparent material.

3.6 photographic developing set: A toy containing chemicals (developer, stop bath and fixing bath) to process black-and-white photographic film and prints and designed to teach the basic principles of photography.

3.7 adhesives, paints, lacquers, varnishes, thinners and cleaning agents supplied or recommended in model sets: Products used to assemble and coat models, e.g. motorcars, aeroplanes, houses, ships.

3.7.1 adhesive: A non-metallic substance capable of joining materials by surface bonding (adhesion) and the bond possessing adequate internal strength (cohesion).

3.7.2 water-based paint: A pigmented material which when applied in a liquid form to a surface, forms after a time a dry adherent film.

3.7.3 paints and lacquers containing solvents: Coatings based on binders, solvents, dyes and pigments (colouring agents), fillers and modifiers.

3.7.4 varnishes: Low viscosity lacquers.

3.7.5 thinners and cleaning agents (solvents): Products which are intended to obtain the required viscosity of paints and lacquers and to clean tools and brushes.

4 Plaster of Paris (gypsum) moulding sets

NOTE: Basically plaster of Paris (gypsum) is not a harmful material, but if the powder is inhaled or swallowed, it may form hard clots in the lungs or in the stomach.

4.1 Marking

The outer packaging shall in addition to the marking required in 10.1 bear the following:

CAUTION! For children over 5 years of age only.

For use under adult supervision.

Read the instructions before use, follow them and keep them for reference.

4.2 Safety rules

The instructions for use shall in addition to the rules required in 11.4 contain the following safety rules:

Do not place the material in the mouth.

Do not inhale dust or powder.

Do not apply to the body.

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