BRITISH STANDARD

BS EN
13920-5:2003

Aluminium and aluminium alloys — Scrap —

Part 5: Scrap consisting of two or more wrought alloys of the same series

The European Standard EN 13920-5:2003 has the status of a British Standard

ICS 13.030.50; 77.120.10

BSI
British Standards

National foreword

This British Standard is the official English language version of EN 13920-5:2003.

The UK participation in its preparation was entrusted to Technical Committee NFE/35, Light metals and their alloys, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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English version

Aluminium and aluminium alloys - Scrap - Part 5: Scrap consisting of two or more wrought alloys of the same series

Aluminium et alliages d'aluminium - Scrap (matières premières pour recyclage) - Partie 5: Scrap composé de deux ou plusieurs alliages de corroyage de la même série

Aluminium und Aluminiumlegierungen - Schrott - Teil 5: Schrott aus zwei oder mehr Knetlegierungen der gleichen Legierungsserie

This European Standard was approved by CEN on 28 February 2003.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 13920-5:2003) has been prepared by Technical Committee CEN /TC 132, "Aluminium and aluminium alloys", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

Within its programme of work, Technical Committee CEN/TC 132 has entrusted CEN/TC132/WG 20 "Scrap" to prepare the following standard.

EN 13920 comprises the following parts under the general title "*Aluminium and aluminium alloys — Scrap*":

¾ *Part 1: General requirements, sampling and tests*

¾ *Part 2: Unalloyed aluminium scrap*

¾ *Part 3: Wire and cable scrap*

¾ *Part 4: Scrap consisting of one single wrought alloy*

¾ *Part 5: Scrap consisting of two or more wrought alloys of the same series*

¾ *Part 6: Scrap consisting of two or more wrought alloys*

¾ *Part 7: Scrap consisting of castings*

¾ *Part 8: Scrap consisting of non-ferrous materials from shredding processes destined to aluminium separation processes*

¾ *Part 9: Scrap from aluminium separation processes of non-ferrous shredded materials*

¾ *Part 10: Scrap consisting of used aluminium beverage cans*

¾ *Part 11: Scrap consisting of aluminium-copper radiators*

¾ *Part 12: Turnings consisting of one single alloy*

¾ *Part 13: Mixed turnings consisting of two or more alloys*

¾ *Part 14: Scrap from post-consumer aluminium packagings*

¾ *Part 15: Decoated aluminium scrap from post-consumer aluminium packagings*

¾ *Part 16: Scrap consisting of skimmings, drosses, spills and metallics*

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

1 Scope

This European Standard specifies characteristics chemical composition and metal yield of aluminium scrap consisting of a mix of pieces obtained from two or more wrought aluminium alloys of the same series.

Examples

Cuttings of sheet, strip and tube, extruded profiles, defective aluminium products.

Old selected scrap.

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 (including amendments).

prEN 12258-3:2000, *Aluminium and aluminium alloys — Terms and definitions — Part 3: Scrap*.

EN 13920-1:2003, *Aluminium and aluminium alloys — Scrap — Part 1: General requirements, sampling and tests.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN 12258-3:2000 and EN 13920-1:2003 apply.

4 Ordering information

The ordering information shall include:

¾ the number of this European Standard (EN 13920-5);

¾ the scrap category (scrap consisting of two or more wrought alloys of the same series);

¾ the gross mass of the consignment;

¾ the definition of the beginning and end of the period during which the scrap shall be delivered;

¾ any characteristics deviating from those specified under 5.2, 5.3 and 5.4, e. g. presence of foreign material;

¾ information about the main alloys which characterise the whole lot composition, with reference to one of the Tables shown under 5.3.

The ordering information should include:

¾ information about the origin of the scrap;

¾ any information about size and surface condition of the pieces, whenever meaningful.

5 Requirements

5.1 General

In addition to the requirements specified in EN 13920-1, the requirements given in 5.2, 5.3 and 5.4 shall be met.

If the scrap does not meet all these requirements, the supplier shall notify the deviating characteristics to the purchaser and shall obtain his agreement before shipment.

5.2 Characteristics

The scrap shall not contain more than 5 % (mass fraction) of oil, grease, dust, plastics and any other type of foreign non-metallic material as a total. The scrap shall be free from foreign metallic materials.

5.3 Chemical composition

If not otherwise agreed the chemical composition shall conform to the requirements given in one of the following Tables.

Table 1 — Multi-purpose base

Composition in percent (mass fraction)

Si max.	**Fe** max.	**Cu** max.	**Mn** max.	**Mg** max.	**Zn** max.	**Pb** max.	**Sn** max.	**others each** max.	**Al**[a] min.
0,7	0,7	0,40	0,50	0,6	0,40	0,10	0,10	0,10	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 2 — Basis for 2xxx series

Composition in percent (mass fraction)

Si max.	**Fe** max.	**Cu** max.	**Mn** max.	**Mg** max.	**Zn** max.	**others each** max.	**Al**[a] min.
0,50	0,50	3,5	0,7	2,0	0,25	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 3 — Basis for 3xxx series

Composition in percent (mass fraction)

Si max.	**Fe** max.	**Cu** max.	**Mn** max.	**Mg** max.	**Zn** max.	**Cr** max.	**Ti** max.	**others each** max.	**Al**[a] min.
0,60	0,6	0,20	1,3	1,3	0,20	0,10	0,10	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 4 — Basis for 5xxx series, low magnesium

Composition in percent (mass fraction)

Si max.	Fe max.	Cu max.	Mn max.	Mg max.	Zn max.	Cr max.	Ti max.	others each max.	Al[a] min.
0,30	0,50	0,10	0,6	2,5	0,25	0,20	0,10	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 5 — Basis for 5xxx series, high magnesium

Composition in percent (mass fraction)

Si max.	Fe max.	Cu max.	Mn max.	Mg max.	Zn max.	Cr max.	Ti max.	others each max.	Al[a] min.
0,30	0,50	0,10	0,6	2,5 to 6,0	0,25	0,20	0,10	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 6 — Basis for 6xxx series

Composition in percent (mass fraction)

Si max.	Fe max.	Cu max.	Mn max.	Mg max.	Zn max.	Cr max.	Ti max.	others each max.	Al[a] min.
0,6	0,50	0,20	0,15	0,50	0,25	0,20	0,10	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 7 — Basis for 7xxx series, with chromium

Composition in percent (mass fraction)

Si max.	Fe max.	Cu max.	Mn max.	Mg max.	Zn max.	Cr max.	Ti max.	others each max.	Al[a] min.
0,40	0,50	1,0	0,20	2,5	6,5	0,20	0,10	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

Table 8 — Basis for 7xxx series, with zirconium

Composition in percent (mass fraction)

Si max.	Fe max.	Cu max.	Mn max.	Mg max.	Zn max.	Ti max.	Zr max.	others each max.	Al[a] min.
0,50	0,50	1,0	0,20	2,5	6,5	0,10	0,20	0,05	remainder

[a] The aluminium content is the difference between 100 % and the total of all the other elements present with values no less than 0,010 % rounded to the second decimal (before the calculation is made).

5.4 Metal yield

The metal yield of scrap pertaining to this standard as determined in accordance with EN 13920-1 shall be 88 %.

6 Classification procedure, treatment of non-conformities and arbitration

The classification procedure which includes sampling and tests, the treatment of non-conformities and arbitration shall be in accordance with EN 13920-1, as appropriate.

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