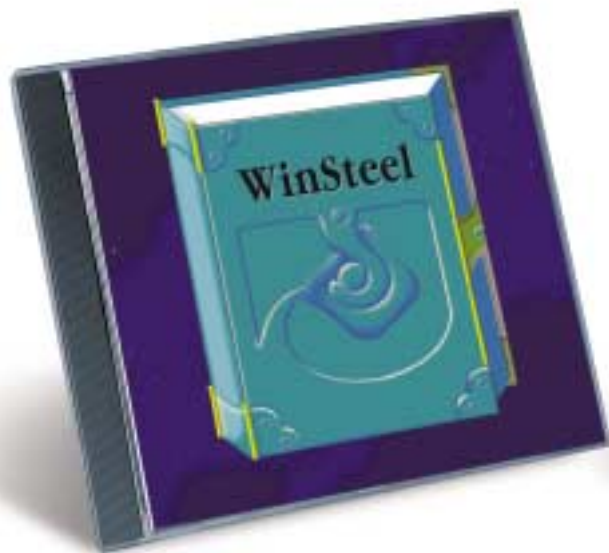


How to translate DIN to GOST, EN to ASTM, JIS to BS?

to buy standards?..

to ask a colleague?..

to delve in guide-books?..



But maybe just to switch on your PC?

International Steel and Non-Ferrous Translators

WinSteel Database atabase contains data on more than 75,000 steel grades of 25 countries: Germany, France, Italy, CIS, USA, UK, Japan, China, Korea and others as well as grades included in European (EN) and two international (ISO and UIC) standards.

WinAlloy Database includes information on more than 37,000 non-ferrous metals and alloys of 30 countries: Germany, France, CIS countries, USA, UK, Japan, Italy, Canada and others as well as grades included in European (EN), International (ISO) and Pan American (COPANT) standards.

Quantor-Soft Metal

Mail address: P.O. Box 39, 119049 Moscow, Russia
Phone: +7 495 234 4905

E-mail: inform@metalddata.info
Fax: +7 495 232 3996
Web: www.metalddata.info

Features:

- Ability to find foreign equivalents for steel or alloy specified in any national standard;
- Two levels of the equivalence search: the easiest way to use Fast Search and the Advanced Search for specialists;
- Ability to find steel or alloy if you know only its chemical composition;
- Search for a grade in the database by Mask (used if you don't know correct grade designation).

Benefits:

- Fast searching of the data on compositions and equivalents within seconds;
- Ensure that you have the most complete and up-to-date information on steels and metals worldwide;
- Printing and saving in HTML files data on grades and equivalents;
- Context Help and comprehensive User's Guides with illustrations of operation with the software;
- Possibility to operate with all major network hardware and software.

With your purchase you receive:

- Unlimited license to use the software;
- Our technical Support Service;
- Software updates every quarter without additional payments during the warranty period of 12 months;
- Free access to the Online software versions during the warranty period;
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- Hot information on new software versions with ability to buy upgrades.

Order Form

| Software | For single PC | Multi - User | | Amount |
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| WinSteel | €350 - ____ | €525 - ____ | €700 - ____ | € ____ |
| WinAlloy | €350 - ____ | €525 - ____ | €700 - ____ | € ____ |
| WinSteel + WinAlloy | €630 - ____ | €925 - ____ | €1260 - ____ | € ____ |
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International Translator of Non-Ferrous Metals and Alloys

WinAlloy

Why is WinAlloy Software Better than Reference Handbooks on Metals and Alloys?

- WinAlloy database contains information on alloys equivalents selected by our experts from a number of different reference books, standards and brochures of metal producing companies of the whole world.
- Using WinAlloy you will find even those equivalents, which you cannot find directly in any sources used by us.
- WinAlloy software allows to find not only exact but similar equivalents by comparison of chemical compositions of a sample alloy and its presumed equivalents.
- WinAlloy software allows to find an alloy in the database and its equivalents if you know only its composition.

What does WinAlloy differ from the Similar Software by ?

- We offer you not only complete database containing information on more than 38,000 metals and alloys but also a software providing simple and efficient operation with the database involved.
- WinAlloy software allows to find equivalents in two modes: by known alloy grade and by known chemical composition.
- Using WinAlloy you can find a designation of an alloy and its equivalents even in that case when only its chemical composition is known.
- WinAlloy provides to save information on found equivalents in the Notepad so that their repeated search could take much less time.
- If you do not know exact name of an alloy you have an opportunity to find it in the database by using Search by Mask.
- WinAlloy database is constantly updated. We issue new software releases every three months.
- Besides offline software version on CD-ROM we'll give you access to WinAlloy Online. It allows you to get required information when you are out of your office also.
- WinAlloy possesses friendly interface provided with the comprehensive User's Guide with illustrations of operating with the software and Help.

International Translator of Non-Ferrous Metals and Alloys

WinAlloy

General Information

WinAlloy is original user-friendly software that helps you to find the correspondence between non-ferrous metals and alloys used in your country and the grades of the other industrial countries. WinAlloy, ver. 1.5 database contains data on chemical composition of more than **38,000 grades of 33 countries**: Russia, Ukraine and other CIS countries, USA, Germany, UK, Japan, France, Italy, Canada, China, Finland, Norway, Sweden, Austria, Switzerland, Spain, Belgium, Netherlands, Czech & Slovak Republics, former Yugoslavia, Australia, India, Mexico, Argentina, South Africa, as well as metals & alloys included in *European (EN)*, *International (ISO)* and *Pan American (COPANT)* standards.

WinAlloy allows you:

- to get information *on chemical composition* of alloy of your interest in any country,
- to find *foreign equivalents of the known alloy* in another country (countries),
- to learn *the designation of an alloy* (and find its equivalents) if you know only its composition.

Database

The database contains the following information on alloys:

- designation of the grade;
- chemical composition;
- standard or list of standards containing information on the alloy;
- additional information (remark);
- information on other designations of the alloy;
- fields of application of the alloy;
- names of alloy groups that include the given alloy;
- generalised list of the alloy equivalents in other countries.

Chemical composition of each alloy contains the percentage of chemical elements in it. The number of elements is determined by the type of an alloy and is different for different alloys. *The total number of chemical elements* contained in the software database is **60**. Beside the said elements, chemical composition of some alloys defines several generalised parameters which the database considers as pseudo-elements:

- **ET** - total content of all other elements in the alloy;
- **OE** - content of each of the other elements in the alloy;
- **OT** - total content of admixtures in the alloy;
- **REM** - total content of rare-earth metals.

By base materials, alloys are divided into groups. Now separate groups constitute alloys based on *aluminium (Al)*, *magnesium (Mg)*, *copper (Cu)*, *nickel (Ni)*, *tin (Sn)*, *lead (Pb)*, *titanium (Ti)*, *zinc (Zn)*. *Beside the above groups, the database includes three more groups uniting:*

- alloys based on *gold (Au)*, *silver (Ag)*, *platinum (Pt)* and *palladium (Pd)* – the **Precious metals** group,
- alloys based on *iron (Fe)* – *steels*, *nickel (Ni)*, *cobalt (Co)* and *chromium (Cr)* with the content of other elements over 25% – the **Special alloys**,
- all other non-ferrous metals and alloys – the **Others** group.

Search for Equivalents

WinAlloy software provides two types of the search for equivalents:

- **by alloy grade**: you know an alloy grade in one country and you want to find its equivalents in another country (other countries);
- **by chemical composition**: you know the chemical composition of an alloy and you wish to find out its designation and/or to find its equivalent, in other country (countries).

Search by Alloy Grade

The Search by Alloy Grade may be conducted in one of two modes: *Fast Search* or *Search by Comparison of Chemical Compositions* of the alloy and its assumed equivalents.

International Translator of Non-Ferrous Metals and Alloys

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Fast Search

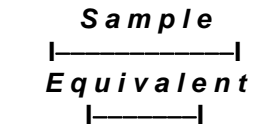
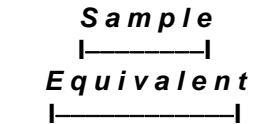
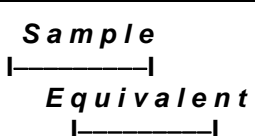
The *Fast Search* consists in establishing direct correspondence between the selected alloy and its equivalent(s) in another country. This correspondence is established by comparing data obtained by our experts on the basis of the analysis of different sources: standards, reference books and brochures provided to us by metal producing companies of the whole world.

Apart from the standard mode, the Fast Search may be carried out in “*extended*” mode. The extended search mode is based on a special algorithm developed by the authors. In a number of cases, this algorithm makes it possible to find quite acceptable equivalents, which you could not find directly in any of sources used by us.

Search by Comparison of Chemical Compositions

If the *Fast Search* does not produce positive results, you have an opportunity to find equivalents *by comparison of chemical compositions* of the sample alloy and alloys included in the software database. The search by the comparison of chemical compositions is performed only by elements indicated by a User (the contents of other elements is disregarded). To establish the correspondence between the indicated chemical elements in the sample alloy and in its potential equivalent, you can use one of the three search modes (see the *Table*).

Modes of Search for Equivalents by Comparison of Chemical Composition

| Search Mode | Content | Illustration |
|--------------------------|---|--|
| Getting within the range | The content of a chemical element in the equivalent fits into the range of this element in the sample grade |  <p style="text-align: center;">S a m p l e ----- E q u i v a l e n t ----- </p> |
| Covering range | The content of a chemical element in the sample grade fits into the range of this element in the equivalent |  <p style="text-align: center;">S a m p l e ----- E q u i v a l e n t ----- </p> |
| Overlapping rangers | The ranges of a chemical element in the sample grade and in the equivalent are overlapping |  <p style="text-align: center;">S a m p l e ----- E q u i v a l e n t ----- </p> |

At a User's wish, he can select the *common search mode* for all indicated chemical elements, or a *separate mode for each indicated element*. Before starting the search, a User can correct chemical composition of the sample alloy, in order to ensure the required flexibility of the search and to fulfil the terms of the chosen search mode.

On searching for equivalents by comparison of chemical compositions a User can use some *additional opportunities*:

1. To mark a chemical element as *an alloy base*. To process the content of such elements in the search, we use the algorithm that consists in the following:
 - to determine the correspondence of the content of the above elements in the sample alloy and in its presumed equivalents, the *Overlapping ranges search mode* is used;
 - *the maximum* value of the content of the base element is calculated as difference between 100% and minimum values of the content of *all other elements* constituting the alloy;
 - *the minimum* value of the content of the said element is assumed as a half of the maximum value.
2. To mark that in the search for equivalents, an element should be treated as *admixture*. During the search, the elements so marked are processed in a different way from the other elements included in the search. This special treatment consists in the following:

International Translator of Non-Ferrous Metals and Alloys

WinAlloy

- for elements marked as admixtures, the search mode chosen for other elements is disregarded;
 - the correspondence between the contents of such elements is considered to be established, if the said element is absent in the sample alloy or in an equivalent, or its content fits into the range $0 - x\%$ where x is a ratio that can be established by a User.
3. Depending on the selected search mode to enter *values of minimum coincidence and maximum discrepancy of the ranges* of content an element in the sample alloy and an equivalent. It is necessary to narrow the circle of equivalents considered, excluding the alloys whose chemical compositions, though meet the conditions of the chosen search mode, but their content ranges of some elements do not coincide with the ranges of the same elements in the sample alloy.

Search by Chemical Composition

In many respects, *the search for an alloy by known chemical composition* is similar to the search by alloy grade by comparison of chemical compositions.

The search is conducted only by the marked chemical elements in one of the modes described above (see the *Table*). Here again you can use its additional possibilities, namely, *mark the selected elements as an alloy base or as admixtures, enter the values of minimum coincidence and maximum discrepancy of the ranges, and correct the parameters of additional set-up. The main difference is that you should enter the chemical composition of the sample alloy manually from the keyboard.*

Search Results

The found equivalents of an alloy you need are placed in the list-box. Using this list-box you are allowed:

1. *To compare* chemical composition of the chosen alloy with the chemical composition of each equivalent from the list-box. Such a comparison is made either in a table form or in a graphic form by means of comparative histograms.
2. *To delete* an unnecessary equivalent (equivalents) from the list.
3. To store information on found equivalents in *the Notepad*.
4. To *print out* information on equivalents.
5. To save information on found equivalents in *HTML file* to use it in other Windows applications.

Notepad

The Notepad is intended for storing information on alloys selected by you in the course of operation with the software. The information entered by you is stored on the hard disk of your PC and you can use it in your future sessions of operation with the software.

The Notepad consists of two sections:

1. *The first section* is called *General Notepad*, and you can store in it information on *any alloy* found by you in the software database.
2. *The second section – Notepad of Equivalents* is intended for storing information only on equivalents of different alloys.

Search for Alloy in the Database by Mask

In case you do not know exact designation of an alloy for which you are going to look for an equivalent, you have an opportunity to find the alloy in the database of the software by using the mode of *Search by Mask*.

Mask is a designation of an alloy where some unknown characters (or groups of characters) are replaced with signs $*$ or $?$. The sign $?$ is used to replace only one unknown character and the sign $*$ is used to replace a group of characters (a group may include any number of characters, also one character, or no character). The difference between upper- and lower-case letters in the Mask field is disregarded.

On the Search by Mask a User also can use the mode *Search by "short name"* in which the search will consider only the alphanumeric characters that he entered in the Mask field. The other characters, namely: full stops, commas, dashes, blanks, slashes, etc. will be disregarded in the search, even if he enters them in the Mask field.

International Translator of Non-Ferrous Metals and Alloys

WinAlloy

Supply and Installation

Standard delivery package includes:

- software on CD-ROM;
- comprehensive User's Guide containing detailed information on the software with a lot of samples;
- USB security device (HASP) for illegal copy protection.

The software can be delivered in two optional configurations, i.e. for use on **single PC** in a time or for **network (multi-user) use**.

Requirements for Hardware and Operating System

- Windows 95 / 98 / NT 4.0 / 2000 / ME / XP / Vista;
- 30 MB of free hard disc storage;
- Pentium / Pentium II / Celeron / Pentium III / Pentium IV;
- 16 MB RAM or more;
- CD-ROM read driver.

Installation

To install the software it is necessary to have not less than 30 Mb of free space on the hard disk of your PC. The installation is carried out automatically by means of the installation program.

Support

The warranty period for WinAlloy software is **12 months** since the date of receiving a copy of the software by a User. During this period our Users:

- receive new software releases (versions) every three months without any additional payment;
- have free access to the **WinAlloy Online** on our web-site **www.metaldataline.com**;
- are guaranteed with replacement of the defective CD-ROMs and the security device providing the revealed faults resulted not in violation of the rules of installation and use the software, contained in the User's Guide;
- are provided with possibility to use consultations of our Support Service Group.

During the whole period of the operation with the software authorised Users are provided with the following:

- subscription to our Annual Support Service with receiving new releases of the software every quarter on completion of the warranty period;
- rights to purchase new versions of the software on upgrade terms;
- discounts when buying other software of Quantor-Soft Metal.

You can contact Quantor-Soft Metal on all questions:

-  (+ 7 495) 234 4905
- Fax** (+ 7 495) 232 3996
-  P.O. Box 39, 119049 Moscow, Russia
- E-mail** winalloy@metaldataline.com
- Web-site** <http://www.metaldataline.com>

Alloy Grade: BrA10Zh3Mts2 GOST 17328-78 (CIS Countries)

Chemical Composition:

| | | | | | |
|-----------|------------------|-----------|-------------------|-----------|------------------|
| Cu | Rest | Al | 9.0 - 11.0 | Fe | 2.0 - 4.0 |
| Mn | 1.3 - 3.0 | Zn | ≤ 1.0 | Ni | ≤ 0.5 |
| Pb | ≤ 0.1 | Sb | ≤ 0.05 | P | ≤ 0.03 |
| Si | ≤ 0.02 | Sn | ≤ 0.01 | As | ≤ 0.01 |
| OT | ≤ 1.7 | | | | |

Included in Standards:

GOST 17328-78 Tin-free foundry bronze ingots. Technical requirements.

Additional Information:

By agreement: Si ≤ 0.1; P ≤ 0.01; Zn ≤ 0.5; All ≤ 1.0

Application:

Castings.
Charge.

Alloy Grade: Mg-C81-T5 EN 2733 (Euronorm)

Chemical Composition:

| | | | | | |
|-----------|------------------|-----------|------------------|------------|------------------|
| Mg | Rest | Th | 2.5 - 4.0 | Zn | 1.7 - 2.5 |
| Zr | 0.4 - 1.0 | Mn | ≤ 0.15 | REM | ≤ 0.1 |
| Cu | ≤ 0.03 | Si | ≤ 0.01 | Ni | ≤ 0.01 |
| Fe | ≤ 0.01 | OE | ≤ 0.05 | ET | ≤ 0.2 |

Included in Standards:

EN 2733

Application:

Sand casting

Results of Analogue Search

Alloy Grade: 2024 Included to 5 standards (Japan)

Chemical Composition:

| | | | | | |
|-----------|--------------|-----------|------------------|-----------|------------------|
| Al | Rest | Cr | ≤ 0.1 | Cu | 3.8 - 4.9 |
| Fe | ≤ 0.5 | Mg | 1.2 - 1.8 | Mn | 0.3 - 0.9 |
| Si | ≤ 0.5 | Ti | - | Zn | ≤ 0.25 |
| OE | - | ET | - | | |

Analogue:

Alloy Grade: AlCuMg2 DIN 1725 Part 1 (Germany)

Chemical Composition:

| | | | | | |
|-----------|---------------|-----------|------------------|-----------|------------------|
| Al | Rest | Cr | ≤ 0.1 | Cu | 3.8 - 4.9 |
| Fe | ≤ 0.5 | Mg | 1.2 - 1.8 | Mn | 0.3 - 0.9 |
| Si | ≤ 0.5 | Ti | ≤ 0.15 | Zn | ≤ 0.25 |
| OE | ≤ 0.05 | ET | ≤ 0.15 | | |

Results of Analogue Search

Alloy Grade: L63 GOST 15527-70 (CIS Countries)

Chemical Composition:

| | | | | | |
|----|--------|----|---------|----|-------------|
| Al | - | Bi | ≤ 0.002 | Cu | 62.0 - 65.0 |
| Fe | ≤ 0.2 | Ni | ≤ 0.3 | P | ≤ 0.01 |
| Pb | ≤ 0.05 | Sb | ≤ 0.005 | Sn | - |
| Zn | Rest | OT | ≤ 0.5 | ET | - |

Analogues:

Alloy Grade: C 27200 UNS (USA)

Chemical Composition:

| | | | | | |
|----|--------|----|---|----|-------------|
| Al | - | Bi | - | Cu | 62.0 - 65.0 |
| Fe | ≤ 0.07 | Ni | - | P | - |
| Pb | ≤ 0.07 | Sb | - | Sn | - |
| Zn | Rest | OT | - | ET | ≤ 0.3 |

Alloy Grade: CZ108 BS 2870 (Great Britain)

Chemical Composition:

| | | | | | |
|----|-------|----|-------|----|-------------|
| Al | - | Bi | - | Cu | 62.0 - 65.0 |
| Fe | ≤ 0.2 | Ni | - | P | - |
| Pb | ≤ 0.3 | Sb | - | Sn | - |
| Zn | Rest | OT | ≤ 0.5 | ET | - |

Alloy Grade: CuZn36 DIN 17660 (Germany)

Chemical Composition:

| | | | | | |
|----|--------|----|---|----|-------------|
| Al | ≤ 0.02 | Bi | - | Cu | 63.0 - 65.0 |
| Fe | ≤ 0.05 | Ni | - | P | - |
| Pb | ≤ 0.05 | Sb | - | Sn | ≤ 0.05 |
| Zn | Rest | OT | - | ET | ≤ 0.3 |

Alloy Grade: C2720 JIS H 3100 (Japan)

Chemical Composition:

| | | | | | |
|----|--------|----|---|----|-------------|
| Al | - | Bi | - | Cu | 62.0 - 64.0 |
| Fe | ≤ 0.07 | Ni | - | P | - |
| Pb | ≤ 0.07 | Sb | - | Sn | - |
| Zn | Rest | OT | - | ET | - |