

CERRO® alloys



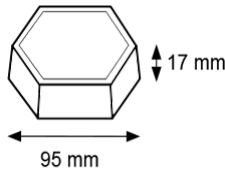
CERRO® products are low melting temperature alloys used as thermal fusibles for forming or temporarily fixing parts. They are used in applications such as eyewear, the manufacture of spatial parts and aeronautics. The METACONCEPT Group offers a range of specific alloys whose melting temperatures, guaranteed by the precise composition of the alloy, provides the behavioural change required (solidus/liquidus) in safety systems or when forming parts in industrial or medical fields. These products are supplied as bars or small ingots; they can also be manufactured in the form of sticks, flat bars or large ingots. Fusible alloys undergo dimensional changes (expansion/shrinkage) depending on the casting and cooling time. Generally, fast casting with a cooling time of less than 15 minutes optimises stability. The METACONCEPT Group collects used baths,

off-cuts, scraps and white metal oxides. [Contact our recycling department](#) to find out more.

Characteristics

Item no.	Designation	Form	Solidus / Liquidus	Density g/cm ³	Brinell hardness	Expansion in %*	Packaging
FB10330 0	CERRO® 103° alloy	Small marked ingot Around 1 kg	Eutectic 103°C	8.67	14.2	+ 0.03 - 0.02*	Bulk/Box
FB18330 0	CERRO® 183° alloy	Small marked ingot Around 1 kg	Eutectic 183°C	8.78	NC	NC	Bulk/Box
FB12430 0	CERROBASE® alloy	Small marked ingot Around 1 kg	Eutectic 124°C	10.3	10.2	- 0.08* + 0.22*	Bulk/Box
FB07330 0	CERROBEND® alloy	Small marked ingot Around 1 kg	70°C - 73°C	9.4	9.2	+ 0.25 + 0.57*	Bulk/Box
FB17030 0	CERROCAST® alloy	Small marked ingot Around 1 kg	138°C- 170°C	8.2	22	- 0.01* - 0.01*	Bulk/Box
FB04730 0	CERROLOW® 47° alloy	Small marked ingot Around 1 kg	Eutectic 47°C	8.9	12	+ 0.05 - 0.02*	Bulk/Box
FB07030 0	CERROLOW® 70° alloy	Small marked ingot Around 1 kg	Eutectic 70°C	9.73	14	+ 0.25 + 0.57*	Bulk/Box
FB22730 0	CERROMATRIX® alloy	Small marked ingot Around 1 kg	103°C- 227°C	9.5	19	+ 0.08 + 0.61*	Bulk/Box
FB09030 0	CERROSAFE® alloy	Small marked ingot Around 1 kg	70°C - 90°C	9.4	9	- 0.04* + 0.25*	Bulk/Box
FB09630 0	CERROSHIELD® alloy	Small marked ingot Around 1 kg	Eutectic 96°C	9.87	14	- 0.4* + 0.25*	Bulk/Box
FB13830 0	CERROTRU® alloy	Small marked ingot Around 1 kg	Eutectic 138°C	8.2	22	+ 0.07 + 0.05*	Bulk/Box

(*) After 200h



CERRO® alloys are non-ferrous, bismuth-based alloys with low melting temperatures. They are made exclusively from high-purity primary metals. They are unlikely to rust and can be reused or recycled. All other fusible alloys (temperatures between 38°C and 227°C) are available on request: such as alloys from Wood's metal and Arcet's metal. The METACONCEPT Group also manufactures small fusible parts for thermal purposes according to specifications.

Applications

Designation	Uses	Characteristics
CERROLOW®	Very low melting temperature. Imprints, work with optical lenses	CERRO® trademark
CERROBEND®	Tube bending, various types of settings, protective radiotherapy screen	CERRO® trademark
CERROSAFE®	Sprinklers, imprints, models	CERRO® trademark
CERROMATRIX®	Dies, anchorings and other fasteners	CERRO® trademark
CERROBASE®	Dies	CERRO® trademark
CERROTRU® GREEN ALLOY	Moulds, models, dies, settings, electroforming mandrels * Guaranteed to be lead-free and cadmium-free	CERRO® trademark
CERROCAST® GREEN ALLOY	Moulds, models, dies, settings, electroforming mandrels * Guaranteed to be lead-free and cadmium-free	CERRO® trademark
CERROSHIELD®	Protective radiotherapy screen	CERRO® trademark

(*) Lead-free alloys - European standard no. 2000 / 53 / CE

Implementation

The product safety information sheet below is available upon request from the METACONCEPT Group.

The implementation method is specific to each workshop and depends on the alloy and its application.

In all cases, the metal needs to be placed in a crucible.

Bring the temperature of the alloy to 20°C above the temperature of its liquidus. You can then pour the molten metal into the mould prepared for this purpose.

Let it cool, taking into account possible expansion or shrinkage.

After use, the alloy may be re-melted and reused.

If this application is repeated frequently, it would be wise to contact the METACONCEPT Group so that they can conduct a metallurgical analysis and potential purification. Indeed, contaminants such as metal from the mould and oxidation from the surrounding air could slightly alter the composition of the alloy.

Precautions for use

To prevent burns caused by the molten metal, it is advisable to wear a protective apron, shoes, gloves, helmet and glasses.

Do not smoke at the workstation.

The workstation must be well ventilated.

Wash your hands when leaving the workstation.

Comments:

[Contact our technical department](#) to ascertain which product is most suited to your application.

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