

LEAD CONTAINERS

Radiological Protection

ver. 04.03.v02



radiological protection

DESCRIPTION

Lead is an excellent shielding against electromagnetic radiation (gamma and X-rays) due to its density of $11,33 \text{ g/cm}^3$, high atomic number, degree of stability and also because it is so easy to work with. From an economic point of view, its availability and cost make it very attractive in comparison with other elements of similar density.

At AMAT METALPLAST we have wide experience in the field of lead handling for the development of containers in collaboration with our customers: radioisotope manufacturers, waste managing companies, hospitals, research centres, etc.



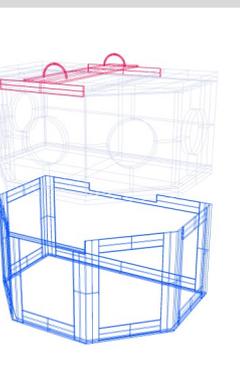
APPLICATIONS

Lead-lined containers are used to contain radioactive sources and avoid radiation out of the container.

In certain applications, the lead container aims to isolate the inside from environmental background radiation. In this way, it is possible to perform experiments and measurements in the box, where radiation detectors measure radiation and prevent environmental radiation.

CUSTOMISED WORKS

Lead-lined containers are usually custom-made to meet every need. We normally start with a plan or a simple drawing provided by the customer. When necessary, pieces are drawn again in order to confirm shapes and details.



COMPOSITION

The containers are made of lead with a purity of 99,985%, alloyed with 4% antimony.

The purpose of antimony is to grant hardness to the piece, ensure its integrity and avoid deformities.

Other compositions are possible according to our customer's requirements.

DELIVERY TIME

Delivery time depends on each project. By way of information, 4-5 weeks is our usual delivery time.

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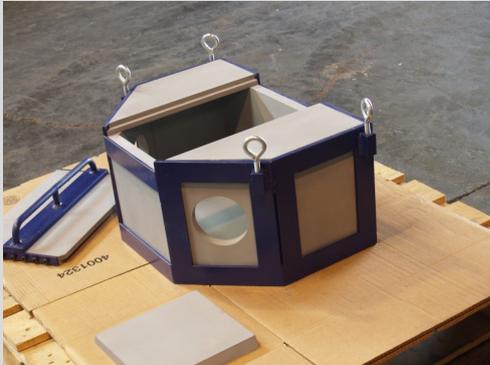
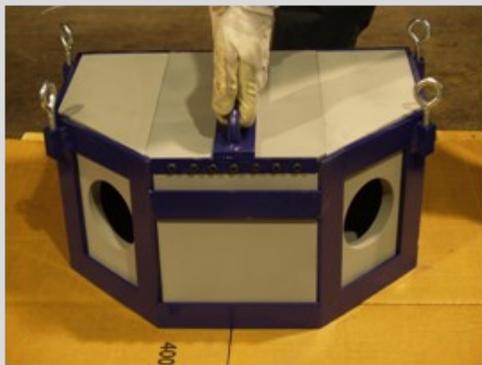


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Lead shield for a radiation detector.

ADASA SISTEMAS (CDTI /
UNIVERSITAT DE BARCELONA)



Lead shield for a germanium detector

INSTITUTO DE ESTRUCTURA
DE LA MATERIA (I.E.M.) -
CFMAC—CSIC



Lead container for radioactive sources for a Waste Centre.



One-piece lead container for small radioactive emitters. In this case, it contains tritium markers.