

LCM Products - Cast - Magneto-Optic Alloys...

TbFeCo based alloys are produced by LCM to a high degree of compositional control and with very low levels of critical impurities such as oxygen. Through expert selection of raw materials and by using closely controlled processing techniques, such alloys are manufactured to the most exacting of specifications.

Compositions and Purity:

(weight %)

Terbium/Gadolinium	40 - 70%
Cobalt	3 - 8%
Iron	Balance
Aluminium	<0.02
Silicon	<0.02
Calcium	<0.01
Transition metal impurities, each	<0.02
Oxygen	<0.05
Carbon	<0.005

Individual compositions are usually set by the end-user, with alloys manufactured and supplied to specifications agreed between LCM and the customer.

Alloying additions

Gadolinium may be used as a substitute for terbium; tantalum and/or chromium are common additions to Tb-Fe-Co alloy systems.

Form

Material is routinely supplied in the form of powder, milled to a specified size requirement.

Quantity

Typical batch sizes for magneto-optic alloy powders range from 10kg to 50kg

Packaging

Inner: Aluminised laminate packs, vacuum-sealed to prevent oxidation.

Outer: Steel drums, typically with 20-50kg per drum.

Quality assurance

Production processes are part of our quality management system – certified to ISO9001: 2000 standard. Each batch is supplied with a Certificate of Conformance detailing the results of chemical and gas analysis and of particle size in compliance with specifications agreed with the customer.