

# LCM

## Products - Cast - Nd-Fe-B...

LCM is a wholly independent manufacturer of Nd-Fe-B alloys, licensed by the original patent holder, Sumitomo Special Metals Co. Ltd. Considerable expertise in raw material selection, processing conditions and product characterisation has resulted in a well-earned reputation for delivery of consistent alloys, meeting the most demanding of technical specifications. LCM also offers a scheme for taking-back sintered magnet materials from customer plants, which are re-processed into useful feedstock alloy for re-supply.

### Compositions and Purity:

Illustrating the range of compositions and typical impurity levels.

(Weight %)

|                               |           |
|-------------------------------|-----------|
| Total Rare Earth Metal (TREM) | 28 - 33   |
| Neodymium                     | 15 - 33   |
| Dysprosium                    | 0 - 15    |
| Praseodymium                  | 0 - 10    |
| Terbium                       | 0 - 10    |
| Cobalt                        | 0 - 5     |
| Niobium                       | 0 - 3     |
| Gallium                       | 0 - 1     |
| Aluminium                     | 0 - 1     |
| Boron                         | 0.8 - 1.5 |
| Iron                          | Balance   |
| Manganese                     | <0.05     |
| Nickel                        | <0.05     |
| Silicon                       | <0.1      |
| Magnesium                     | <0.02     |
| Oxygen                        | <0.05     |
| Carbon                        | <0.02     |

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

### Alloying additions

Common alloying additions to the basic Nd-Fe-B formulations include dysprosium, niobium, gallium and cobalt.

### Form

Typically material is supplied as crushed ingot up to 25mm in size. Other sizes may be offered, depending on customer requirements.

### Quantity

Batch sizes range from 5kg to 5000kg.

### Packaging

Inner: Plastic Pails or polyethylene sacks, typically 25kg per packing unit.

Outer: Steel drums up to 400kg net weight.

### 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 from full analysis according to specification.