

## Magnetic properties of Cast Al-Ni-Co permanent magnets

| Grades      | Remanence |      | Coercive Force |      | Intrinsic Coercivity |      | Maximum Energy Product |       | Curie Temp. | Temp. Coefficient of Br | Remarks   |                  |          |
|-------------|-----------|------|----------------|------|----------------------|------|------------------------|-------|-------------|-------------------------|---|------------------|----------|
|             | Br        |      | Hcb            |      | Hcj                  |      | (BH)max                |       |             |                         |   |                  |          |
|             | T         | KG   | KA/m           | KOe  | KA/m                 | KOe  | kJ/m <sup>3</sup>      | MGOe  |             |                         |   |                  |          |
| AlNiCo12/6  | 0.64      | 6.4  | 52             | 0.65 | 56                   | 0.70 | 12                     | 1.50  | 810         | -0.03                   | Equivalent to AlNiCo-2                            | Equiaxed Crystal | Isotropy |
| AlNiCo13/6  | 0.75      | 7.5  | 52             | 0.65 | 56                   | 0.70 | 13                     | 1.63  | 810         | -0.03                   | Equivalent to AlNiCo-2                            |                  |          |
| AlNiCo18/10 | 0.53      | 5.3  | 90             | 1.13 | 97                   | 1.22 | 18                     | 2.26  | 860         | -0.01                   |   |                  |          |
| AlNiCo20/11 | 0.60      | 6.0  | 100            | 1.26 | 108                  | 1.36 | 20                     | 2.51  | 860         | -0.01                   |   |                  |          |
| AlNiCo36/6  | 1.15      | 11.5 | 60             | 0.75 | 62                   | 0.78 | 36                     | 4.52  | 850         | -0.02                   | Equivalent to AlNiCo-6                            | Anisotropy       |          |
| AlNiCo38/5  | 1.20      | 12.0 | 50             | 0.63 | 52                   | 0.65 | 38                     | 4.77  | 850         | -0.02                   | Equivalent to AlNiCo-5                            |                  |          |
| AlNiCo40/5  | 1.25      | 12.5 | 49             | 0.62 | 50                   | 0.63 | 40                     | 5.03  | 850         | -0.02                   | Equivalent to AlNiCo-5                            |                  |          |
| AlNiCo44/5  | 1.27      | 12.7 | 52             | 0.65 | 53                   | 0.67 | 44                     | 5.53  | 850         | -0.02                   | Equivalent to AlNiCo-5DG<br>Semi-columnar Crystal |                  |          |
| AlNiCo52/6  | 1.30      | 13.0 | 56             | 0.71 | 57                   | 0.72 | 52                     | 6.53  | 850         | -0.02                   | Columnar Crystal                                  |                  |          |
| AlNiCo60/6  | 1.35      | 13.5 | 59             | 0.74 | 60                   | 0.75 | 60                     | 7.54  | 860         | -0.02                   | Columnar Crystal                                  |                  |          |
| AlNiCo38/11 | 0.85      | 8.5  | 110            | 1.38 | 112                  | 1.41 | 38                     | 4.77  | 860         | -0.01                   |   |                  |          |
| AlNiCo40/17 | 0.75      | 7.5  | 156            | 1.96 | 168                  | 2.11 | 40                     | 5.02  | 870         | -0.01                   |   |                  |          |
| AlNiCo46/12 | 0.93      | 9.3  | 120            | 1.51 | 124                  | 1.56 | 46                     | 5.78  | 860         | -0.015                  | Equivalent to AlNiCo-8<br>Equiaxed Crystal        |                  |          |
| AlNiCo48/16 | 0.82      | 8.2  | 144            | 1.81 | 158                  | 1.98 | 48                     | 6.03  | 870         | -0.01                   |   |                  |          |
| AlNiCo72/12 | 1.05      | 10.5 | 114            | 1.43 | 116                  | 1.46 | 72                     | 9.04  | 850         | -0.015                  | Equivalent to AlNiCo-10                           | Columnar Crystal |          |
| AlNiCo80/12 | 1.08      | 10.8 | 120            | 1.51 | 122                  | 1.53 | 80                     | 10.04 | 850         | -0.015                  |   |                  |          |

\* The above table shows typical characteristics. We are happy to offer other grades according to your requirements. Please feel free to contact us.