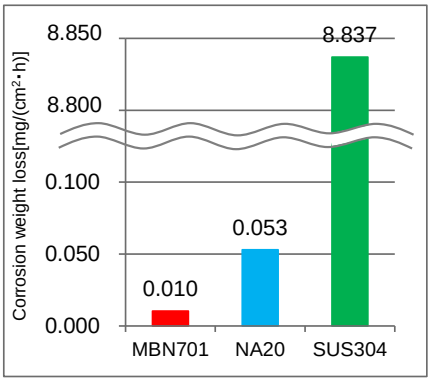
Corrosion and wear-resistant alloy

MBN Alloy

MBN Alloy is a sintered alloy which has excellent corrosion and wear resistance. It has significantly improved corrosion resistance especially against hydrofluoric acid and hydrochloric acid. Also, it has excellent wear resistance and the hardness as same as cemented carbides. These characteristics make it ideal for wear-resistant applications in corrosive environments caused by acids. In addition, it has excellent oxidation resistance and is suitable for wear-resistant applications at high temperatures as well.

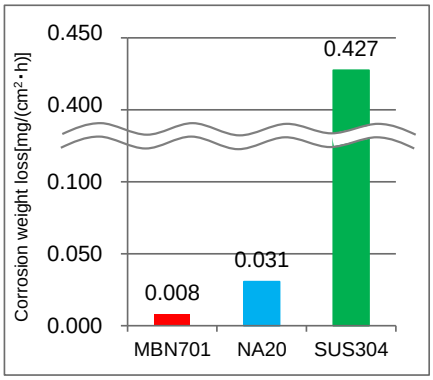
Comparison of corrosion resistance

hydrofluoric acid(10wt%－40℃－10h)



The corrosion weight loss is surpressed to about 0.1% compared to SUS304 when it is immersed in hydrofluoric acid.

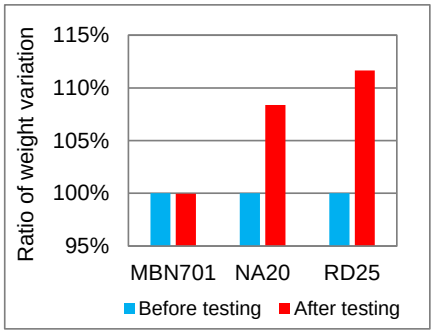
hydrochloric acid(10wt%－40℃－10h)



The corrosion weight loss is surpressed to about 2 % compared to SUS304 when it is immersed in hydrochloric acid.

Comparison of oxidation resistance

In the atomosphere / Retaining 900℃×1h



RD25 shows about 12% and NA20 about 8% oxidation weight gain, but MBN701 shows almost no oxidation weight gain.

Properties

Grades	Specific Gravity	Hardness (HRA)	Transverse Rupture Strength (GPa)	Fracture Toughness (MPa･$m^{1/2}$)
MBN701	8.55	84.0	1.7	20

※All data shown are typical values, not guaranteed values.
※We will not compensate any loss and damage caused by using all data.
※We reserve the right to modify the data due to technical progress.

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