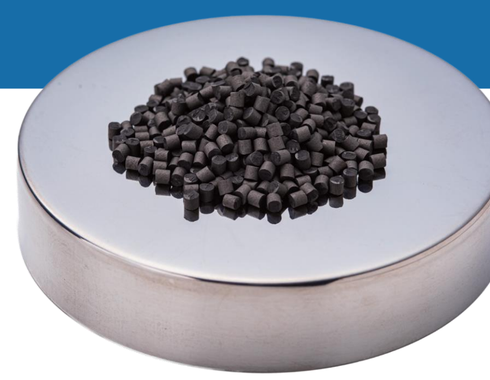


SmFeN Compound

(For injection molding magnets)

Contributing to SDGs with Stable Pricing and High Efficiency: Wellmax™ Samarium Iron Nitrogen Magnets

Advantage

- ☑ Rare-earth iron-based magnetic materials for injection molding.
- ☑ **Cost-stable:** Uses the cost-stable rare-earth element Samarium (Sm).
- ☑ **No specific chemicals (like Co) used.**
- ☑ **Injection molded products:**

Lightweight with high magnetic properties

▸ Reduces device weight

contributing to the reduction of the overall weight of devices.

High electrical resistivity

▸ High electrical resistivity

minimizes eddy current losses, resulting in improved efficiency.

Magnetic Powder	Isotropic NdFeB Injection Molded Product	Isotropic NdFeB Compression Molded Product	SmFeN(S3) Injection Molded Product
Orientation	Isotropic	Isotropic	Anisotropic
Maximum Energy Product	31～64 kJ/㎥ (4～8 MGOe)	63～95 kJ/㎥ (8～12 MGOe)	80～111 kJ/㎥ (10～14 MGOe)
Specific Gravity	4.1～5.9	5.7～6.1	4.1～4.9
Electrical Resistivity (mΩ·m)	0.13	0.056	4.6～95000

※Representative Characteristics

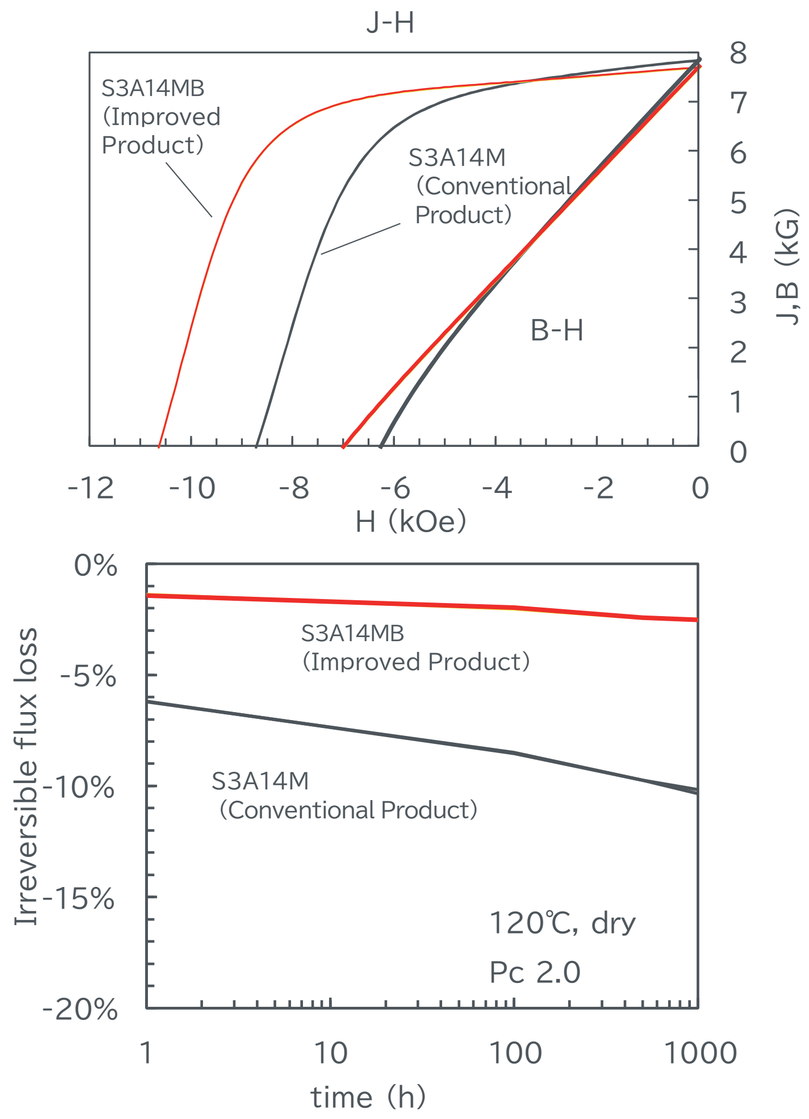


Property of the Improved Product (S3A14MB)

High coercivity reduces demagnetization

Property			S3A14M (conventional product)	S3A14MB (Improved Product)
Magnetic Property	Residual Magnetic Flux Density (Br)	T	0.76～0.80	0.75～0.80
		kG	7.6～8.0	7.5～8.0
	Coercivity (HcB)	kA/m	470～540	520～590
		kOe	6.0～6.7	6.6～7.4
	Intrinsic Coercivity (HcJ)	kA/m	660～800	750～900
		kOe	8.4～9.9	9.5～11.3
	Maximum Energy Product(BH)max	kJ/㎥	107～115	107～115
		MGOe	13.5～14.4	13.5～14.4
Specific Gravity		-	4.7～4.9	4.6～4.9
Flexural Strength		tf/cm2	0.80	0.80

※Representative Characteristics



If you have any question about this product, please feel free to contact us.

https://crossmining.smm-g.com/

X-MINING

SUMITOMO METAL MINING