



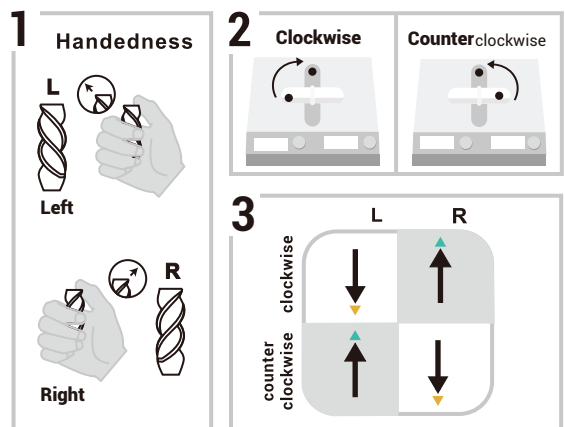
PRODUCT SPECIFICATION		SAN-02	HIGH SHEAR DESIGN
Flow movement	Hybrid axial/radial	<p>Preferred vessel :</p>	<p><b>Reference impeller :</b> Cowl disk</p> <p><b>Utilized in emulsion and dispersion processes of :</b></p> <ul style="list-style-type: none"> <li>Emulsion and suspension polymerization</li> <li>Cosmetic creams, ceramic slurries, and polishing compounds</li> <li>Conductive inks and nanoparticle suspensions</li> </ul>
Flow direction	Down		
Weight	8.10 ± 0.25 g		
Viscosity range	1-205 cP		
RPM range	100-600 RPM		
Volume range	500-1000 mL		
Dimension	55 (L) x 13 (W) x 15 (H) mm		

MATERIAL TECHNICAL DATA	
Shell material	polyethylene naphthalate (PEN)
Application temperature	-60 to 155°C
Color	white
Coefficient of friction	0.12
Hydrolysis resistance	200 hours
Compliance	FDA food contact, USP <87>
Magnet material	SmCo permanent
Remanence (Br)	9,800~11,000 Gs
Sterilization	gamma, steam, EtOH

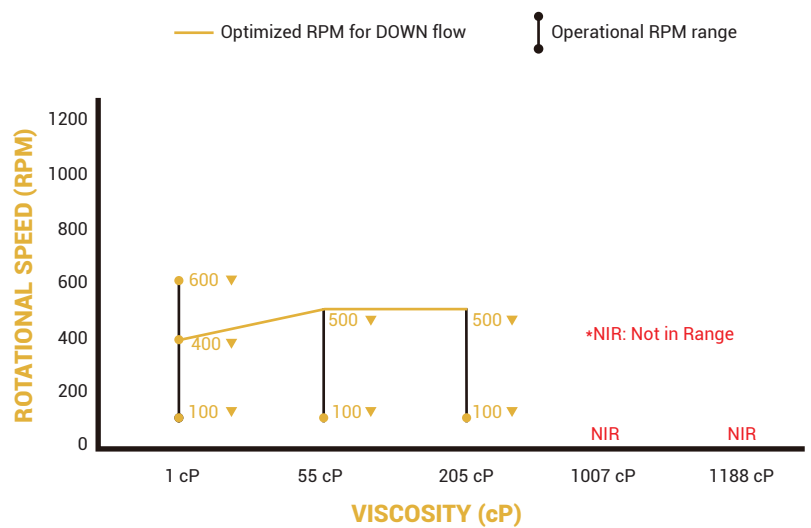
PRODUCT HIGHLIGHT	
	Shell made of PEN to reduce our dependency on PTFE & PFAS
	Food contact safe
	No cell toxicity, bio-inert
	Non-hazardous materials
	Estimated carbon footprint of PEN is 3.4 kg CO <sub>2</sub> eq/kg
	Recyclable with PET bottle

## FLOW DIRECTION SETTING

The up/down flow direction depends on the spin direction of the plate and the handedness of the product.



## RECOMMENDED OPERATING RANGE



# CHEMICAL RESISTANCE CHART

	PEN	PVDF	PTFE
Acetic acid (10%)	A	A	A
Acetic acid (40%)	A	A	A
Acetone	B	D	A
Ammonium chloride (25%)	A	A	A
Benzene	B	A	A
Chloroform	C	A	A
Cyclohexane	A	A	A
Cyclohexanol	A	A	A
Calcium chloride (10%)	A	A	A
Chromic acid (10%)	A	A	A
Citric acid	A	A	A
Diethyl ether	A	A	A
Dimethyl sulfoxide (DMSO)	C	C	A
Dimethyl formamide (DMF)	C	D	A
Ethanol	A	A	A
Ethyl acetate	A	D	A
Ethylene diamine	C	B	A
Ethylene glycol	A	A	A
Formaldehyde (40%)	A	A	A
Formic acid (10%)	A	A	A
Formic acid (30%)	C	B	A
Gasoline	A	A	A
Glycerol	A	A	A
Heptane	A	A	A
Hexane	A	A	A
Hydrobromic acid (10%)	A	A	A
Hydrobromic acid (47%)	A	A	A
Hydrochloric acid (10%)	A	A	A
Hydrochloric acid (37%)	A	A	A
Hydrofluoric acid (5%)	A	A	A
Hydrofluoric acid (50%)	D	B	A

	PEN	PVDF	PTFE
Hydrogen peroxide (30%)	A	A	A
Isopropyl alcohol (IPA)	A	A	A
Methanol	A	A	A
Methyl ethyl ketone (MEK)	A	D	A
Nitric acid (10%)	A	A	A
Nitric acid (20%)	A	A	A
Nitric acid (67%)	D	A	A
Phosphoric acid (10%)	A	B	A
Phosphoric acid (85%)	D	B	A
Potassium hydroxide (10%)	A	A	A
Potassium hydroxide (30%)	B	A	A
Sulfuric acid (10%)	A	A	A
Sulfuric acid (30%)	C	A	A
Sulfuric acid (>80%)	D	A	A
Sodium acetate (40%) sol.	A	A	A
Sodium chloride (sat.) (32%)	A	A	A
Sodium bicarbonate (sat.)	A	A	A
Sodium hydroxide (10%) sol.	A	A	A
Sodium hydroxide (30%) sol.	A	C	A
Sodium hypochlorite	A	A	A
Styrene (monomer)	A	A	A
Tetrahydrofuran (THF)	B	B	A
Toluene	A	A	A
Triethanolamine	C	A	A
Vinyl chloride (monomer)	A	A	A
Xylene	A	A	A

Resistance at 23°C, immersed for 30 days

Ranking definition:

A: weight change <1%, tensile > 95%

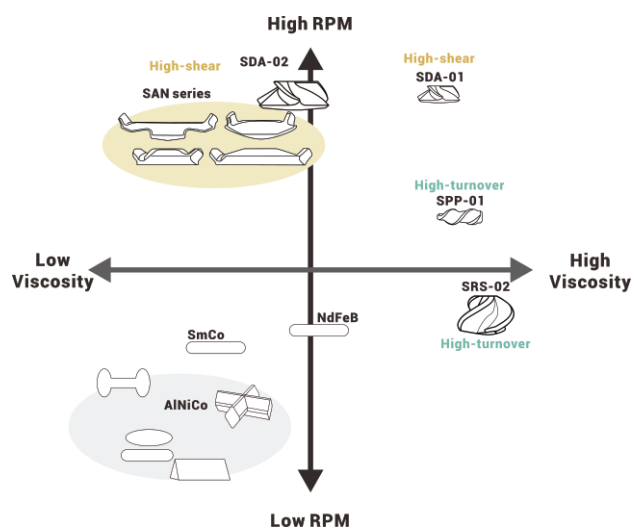
B: weight change between 1~10%, tensile > 75%

C: weight change >10%, tensile <75%

D: dissolved or swelled

## SELECTION MATRIX

type of magnetic stir bars categorized by performance toward various speeds and viscosities.



## PRECAUTION

### Hazard Identification:

Not classified as hazardous according to OSHA or GHS regulations.

Avoid exposure to DMSO, DMF,  $\text{CHCl}_3$ ,  $\text{CCl}_4$ , and HF.

### Check compatibility:

Use chemical resistance chart as a reference.

### Conditions to Avoid:

Temperatures above 160°C.

### Storage:

Magnetic stir bars should be stored in pairs to maintain their magnetic strength, away from steel or iron surfaces and other magnetic fields.

Keep them at ambient temperatures to avoid thermal stress, and handle carefully to prevent mechanical damage.

### Disposal Considerations:

PEN (Polyethylene Naphthalate) can be recycled alongside PET (Polyethylene Terephthalate). Recycled as much as possible with PET or through incineration.

