# **Panasonic**

## "NASBIS" Insulating Sheet

### Type: **EYGY/EYGN**

"NASBIS" is a heat insulating sheet, which is composed of silica aerogel and fiber sheet, created through impregnation process. Pore size of silica aerogel is 10 to 60nm, which means it has smaller space than the mean free path of the air, 68nm. Air molecules do not collide against each other inside the pores, and thus the component shows excellecnt heat insulation performace.

Furthermore, combining NASBIS and PGS Graphite Sheet enables controlling the direction of heat. Composite type provides greater heat insulating performance.



#### **Features**

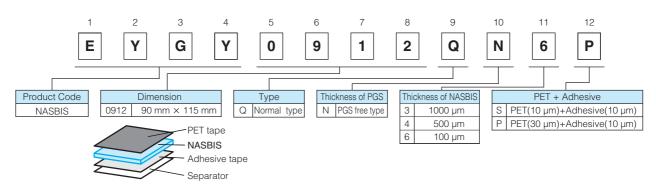
- Low thermal conductivity: 0.020 W/m · K typ.
- Created thin-film sheet; Thickness: 100 µm to 1000 µm
- Various proposals are available when combined with PGS Graphite sheet
- RoHS compliant

#### **Recommended applications**

Smartphone, Wearable equipment, Digital Still Camera, Notebook PCs, Tablet PCs

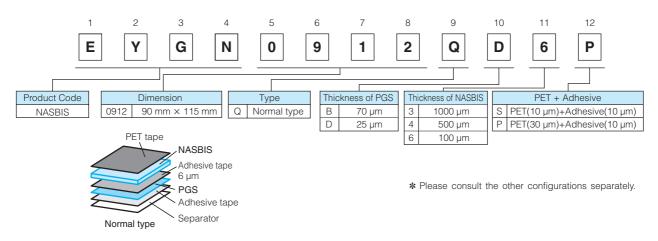
#### **Explanation of Part Numbers**

■ NASBIS Pouch Type (EYGY\*\*\*\*\*\*\*\*\*\*\*)



\* Please consult the other configurations separately.

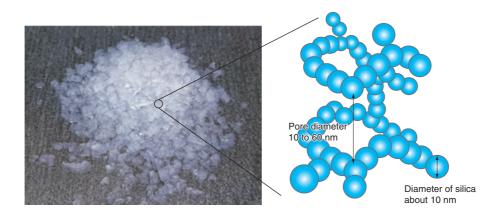
■ NASBIS and PGS Composit Type (EYGN\*\*\*\*\*\*\*\*\*\*\*)



Characteristics of NASBIS							
Thickness	100 μm	500 μm	1000 μm				
Thermal conductivity (W/(m·K))	0.018 to 0.026	0.018 to 0.026	0.018 to 0.026				
Operating temperature limit (°C)	-20 to 100	-20 to 100	-20 to 100				
Size / Laminate pouch (mm)	90 × 115	90 × 115	90 × 115				
Heatproof temperature(°C)	100	100	100				

Typical values, not guaranteed.

#### Appearance of silica aerogel and its nanostructure





#### **Composition example**

NASBIS Pouch Type

Туре		Y - S type	Y - P type	
Structure		PET 10 μm  NASBIS*  Adhesive 10 μm	PET 30 μm  NASBIS*  Adhesive 10 μm	
Heatproof temperature		100 °C	100 °C	
100 μm*	Standard Part No.	EYGY0912QN6S	EYGY0912QN6P	
	Thickness (µm)	120	140	
500 μm*	Standard Part No.	EYGY0912QN4S	EYGY0912QN4P	
	Thickness (µm)	520	540	
1000 µm*	Standard Part No.	EYGY0912QN3S	EYGY0912QN3P	
	Thickness (µm)	1020	1040	

#### NASBIS and PGS Composit Type Normal type

Туре		N - S type	N - S type	N - P type	N - P type
Structure		PET 10 µm  NASBIS*  Adhesive 6 µm  PGS 70 µm  Adhesive 10 µm	PET 10 µm  NASBIS*  Adhesive 6 µm  PGS 25 µm  Adhesive 10 µm	PET 30 µm  NASBIS*  Adhesive 6 µm  PGS 70 µm  Adhesive 10 µm	PET 30 μm  NASBIS*  Adhesive 6 μm  PGS 25 μm  Adhesive 10 μm
Heatproof temperature		100 °C	100 °C	100 °C	100 °C
100 μm*	Standard Part No.	EYGN0912QB6S	EYGN0912QD6S	EYGN0912QB6P	EYGN0912QD6P
	Thickness (µm)	196	151	216	171
500 μm*	Standard Part No.	EYGN0912QB4S	EYGN0912QD4S	EYGN0912QB4P	EYGN0912QD4P
	Thickness (µm)	596	551	616	571
1000 µm*	Standard Part No.	EYGN0912QB3S	EYGN0912QD3S	EYGN0912QB3P	EYGN0912QD3P
	Thickness (µm)	1096	1051	1116	1071

<sup>\*\*</sup> Part numbers listed above are all standard samples for evaluation and selection. Above is not for mass production.

#### ■ Minimum order 10 pcs.

Customized service available for mass production spec.



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