

Cobalt free Indicating silica gel

FA (NB) -series

FA (NB) -series is a desiccant for transportation packing, made of cobalt free indicating silica gel.

■ Application

Electronic device, Electronic parts, Precision machinery, Instruments, Chemicals, Air cargo/ Ocean cargo



■ Characteristics

1. Cobalt-free

It is made of organic compound which is environmentally and biologically safe. It is free from harmful heavy metal unlike conventional indicating silica gel which is made of cobalt chloride.

2. Color change

It changes its color from blue to purple red like conventional indicating silica gel.

3. No corrosion/No deliquescence

It is made of type-A silica gel. It is chemically stable, no corrosion, no deliquescence, and no toxicity.

4. Durability

As it is packaged in non-woven fabric, it is durable.

5. Wide variety of lineup

It has a wide variety of lineup up to 1kg.

6. JIS standard

It conforms to JIS standard ^{(*)1}.

■ Color change

It is dark blue under dry condition, as it adsorbs moisture, it changes to purple red. It gradually changes between RH10% and 40%. After it adsorbs moisture up to its limit, it will not desorb under room temperature.

■ Adsorption capacity

FA (NB) -series conforms to JIS standard for packaging. The major component A-Type silica gel has high moisture adsorbing capacity under low humidity condition.

ITEM		FA	JIS standard
Adsorption Capacity (%)	RH20%	10.0 Min	8.0 Min
	RH50%	25.0 Min	20.0 Min
	RH90%	35.0 Min	30.0 Min
Moisture content (%)		2.5 Max	2.5 Max
pH		4~8	4~8
Specific resistance (Ω · cm)		5,000 Max	3,000 Max

■ Composition (%)

SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O
99.82	0.01	0.01Max	0.02	0.03

■ Safety

The major components, A-type silica gel is so safe as to be designated as food additives. It is chemically stable, tasteless, odorless, no water solubility, no corrosion, and no deliquescence. As it is processed under the strict quality control, performance is stable.

Cobalt chloride which is used in conventional indicating silica gel has been restricted since it was designated as carcinogens by EU directive 98/98/EC. In contrast, FA (NB) series is made of safe alternative material (organic pigment), which is according to all the EU regulation. It is packaged by polyester non-woven fabric that conforms to the packaging requirements of Food Sanitation Law in Japan ^{(*)2}, FDA standard ^{(*)3} and global standard of wastes (the so-called Basel Convention) ^{(*)4}.

■ Specification

Weight	Quantity	Dimension (mm)
5g	1,800	60 × 55
10g	1,000	80 × 55
20g	600	60 × 110
30g	400	75 × 110
50g	250	100 × 110
100g	150	100 × 160
200g	75	110 × 170
300g	50	150 × 190
500g	30	150 × 230
1 kg	15	165 × 300

●Specification can be changed without notification.

(*)1 JIS Z0701 Silica gel Desiccants for Packaging

(*)2 Specifications, Standards and Testing Methods for Containers and Packaging, 3-D-2, Specifications and Standards for Foods, Food additive (No370-notification of health and Welfare Minister in 1959).

(*)3 It conforms to FDA (Food and Drug Administration) guidelines.

(*)4 On March in 1989, [Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal] was passed unanimously by the 112 participating country including Japan at Basel in Switzerland.

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