

To: \_\_\_\_\_

July, 19th 2007

Subject: Change of Silica Gel Indicator

Dear Customer,

Please be advised that the silica gel indicator we use for our semiconductor package will be changed as mentioned below.

Customer is kindly requested to approve the change.

Thank you for your cooperation in advance.

Sincerely

1. Objective products

Semiconductor products of which package contains silica gel indicator

(Part of semiconductor products for PC, ASIC, customized LSI, discrete devices and memories)

2. Contents of change

1) Abolition of 3-, 5-, 6-point indicator (\*)

2) Reduction of cobalt chloride in silica gel (Cobalt chloride-free silica gel \*\*) -- Refer to Appendix 1

3) Integration of silica gel and indicator (integrated silica gel \*) -- Refer to Appendix 2 and 3

4) Reduction of cobalt chloride in indicator -- Refer to Appendix 1 and 2

5) Change of silica gel amount resulting from Reduction of cobalt chloride in silica gel and integration of silica gel and indicator -- Refer to Appendix 3

\* : 3-, 5-, 6-point indicators are abolished for the use because that indicator is stuck to silica gel (cobalt chloride free) (Single indicator is abolished.)

\*\* : A part of our semiconductor product packages have already been free from cobalt chloride.  
This time all silica gel will become free from cobalt chloride.

3. Reason for change

For the compliance with environment protection. (Cobalt chloride free + Reduction of cobalt chloride amount)

4. Schedule of change

Currently used silica gel will be changed from September 2007 one after another.

When the inventory of old type silica gel has run out, new type silica gel is used.

In that case, the semiconductor products will be delivered to customer with old type silica gel and new type silica gel mixed.

Customer is kindly requested to approve the mixture.


5. Inquiry to

- Toshiba Corporation, Semiconductor Company, Tatsuya, Yamada  
Packing And Logistics Engineering Group, Advanced Packaging Engineering Dept.  
Process & Manufacturing Engineering Center

Thank you very much for your kind understanding and cooperation.

Best Regards.

TOSHIBA CORPORATION Semiconductor Company

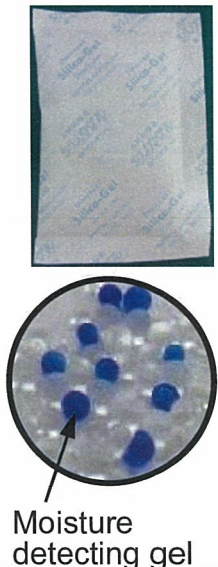

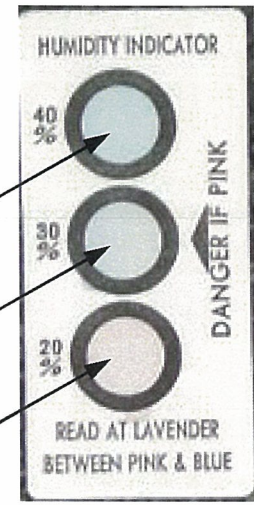
  
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Takuya Sawano

Group Manager, Packing And Logistics Engineering Group, Advanced Packaging Engineering Dept.  
Process & Manufacturing Engineering Center

## Explanation of change contents

Appendix 1

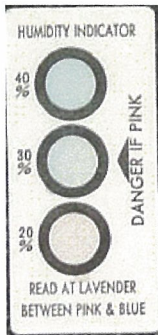




### 1. Cobalt chloride contents

Current product (Silica Gel 20g)			Reduction method of cobalt chloride
Silica gel		Indicator	
20g	5g × 4	3-point	
 <p>Moisture detecting gel</p>			<p>Packaging is classified into following 2 types.</p> <p>① Only silica gel filled in moisture proof bag.</p> <ul style="list-style-type: none"> <li>Substitute for cobalt chloride of moisture detecting gel → <b>Use of cobalt chloride-free material</b></li> </ul> <p>② Silica gel and indicator filled in moisture proof bag</p> <ul style="list-style-type: none"> <li>Silica gel... Substitute for cobalt chloride of moisture detecting gel → <b>Use of cobalt chloride-free material</b></li> <li>Indicator... 3-point type → 30%, 1-point → <b>Reduction of cobalt chloride to half</b></li> <li>Integration of indicator and silica gel by sticking (increasing total mass) and <b>reduction of cobalt chloride contents to less than 0.01%</b></li> </ul>
Cobalt chloride contents 0.085%		Cobalt chloride contents 0.35%	

## Explanation of change contents

Appendix 2

### 2. Specification of silica gel indicator







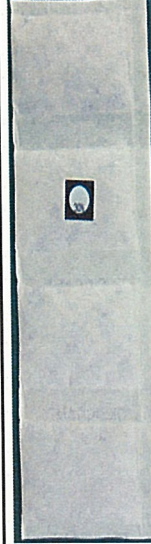




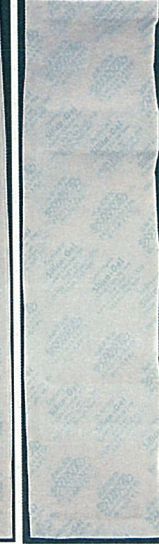







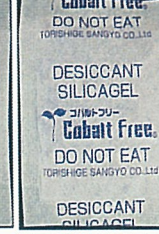




Current product			Integrated silica gel																												
Indicator	Front	Rear	Front	Rear																											
			 Indicator	 Silica gel																											
	<table><tr><td></td><td colspan="2">Cobalt chloride</td></tr><tr><td></td><td>Contents</td><td>Content (%)</td></tr><tr><td>Silica gel</td><td>0.018g</td><td>0.085%</td></tr><tr><td>Indicator</td><td>0.003g</td><td>0.350%</td></tr></table>			Cobalt chloride			Contents	Content (%)	Silica gel	0.018g	0.085%	Indicator	0.003g	0.350%	<table><tr><td></td><td colspan="2">Cobalt chloride</td></tr><tr><td></td><td>Contents</td><td>Content (%)</td></tr><tr><td>Silica gel</td><td>0.000g</td><td>0.000%</td></tr><tr><td>Indicator</td><td>0.002g</td><td>2.960%</td></tr><tr><td>Total</td><td>0.002g</td><td>0.007%</td></tr></table>			Cobalt chloride			Contents	Content (%)	Silica gel	0.000g	0.000%	Indicator	0.002g	2.960%	Total	0.002g	0.007%
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Note) Above photo shows 20g type silica gel.



# Explanation of change contents

## 3. Photos of New and Old Silica Gels

No	Photo Old Silica Gel (typical)						Photo New Silica Gel (integrated type silica gel) (typical)					
1	4-bag type						4-bag type					
	Type A		Type B		Type C		Type A		Type B		Type C	
												
	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
2	Single bag type						Single bag type					
	Type A		Type B		Type C		Type A		Type B		Type C	
												
	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear

Note) ① There are several types of silica gel bag as silica gel is supplied by several suppliers. ② 2-bag type is also provided.

## 4. Change of contained weight of silica gel

① A part of silica gel bags containing 3, 5, 10g silica gel (including cobalt chloride) is changed to integrated type 15g silica gel bag.