

(19)  
(12)

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(43)

2003-0041891  
2003 05 27

(21) 10-2003-0017934  
(22) 2003 03 21

(71) 263 , 114-1402

(72) 263 , 114-1402

:

(54)

Ms) (Polymer) , (Phase Change Materials: PC

가 , 가 ,

, 가가 ,

1

1

2

3

4

5 PVC

6

7

8 PCM DSC (a) , (b)

-

-

1:

2: ( ) 3: ( )

4: 5:

6: 7.

가

(Phase Change Materials: PCMs)  
40 50kcal/kg

10cm

가

가

가

가 가 가

(Encapsulation)

가

가

가 10 $\mu$ m

가

가

가

가 1mm

(樣態)

(樣態)

가

가

[ 1 ]

1

(2)

(1)

(3)

1

, 1

, 2

(3)

2

1

(3)

(4)

(5)

(5) [ 3 ]

(3)

(4)

3

2

(5)

(6)

(4)

가

가

( )

[ 7 ],

[ 4, 5, 6 ]

가 4

3

(6)

가

(2)

가

[ 6 ]

가

1

60 80%  
24

[ 2 ]  
2

1

[ 1 ]

1

0.5mm

5mm

(3)

(6)

[ 1 ]

3

(

) [ 4, 5, 6, 7 ]

(4)

(6)

(3)

3

(4)

2cm

4

3

(3)

(4)

3

4

(4)

5

[ 1 ]

4

[ 2] , [ 1] ( [ 1] (3) ) [ 6] (3)가 가 (4) ,  
 [ 1] (4) ,  
 , 가 -5~110 180~220J/  
 g n- , 가 36 281J/g , 가 32  
 176J/g Na<sub>2</sub>SO<sub>4</sub> · 10H<sub>2</sub>O, 가 36 281J/g Na<sub>2</sub>HPO<sub>4</sub> · 12H<sub>2</sub>O,  
 가 36.4 155J/g Zn(NO<sub>3</sub>)<sub>2</sub> · 6H<sub>2</sub>O, 가 48 201J/g Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 · 5H<sub>2</sub>O, 가 50 134J/g NaCH<sub>3</sub>COO · 3H<sub>2</sub>O, (PEG) 10~50,  
 , 가 25 50 180 235J/g , n- 85 99 %  
 250~350g/mol n-

[ 5], [ 4] , 가 ,  
 [ 6] ,  
 , 가 가 , 가  
 , 가 가 , 가  
 가 가 30 [ 4] 30 50  
 가 가 가

가 , 가 ,  
 가 , 가 ,  
 0.5 5mm 가 , 가  
 가 가 가

- (57)
1. ,  
 (4) (3) (5),  
 (4) ,  
 (3) (4) (3)  
 (5).
  2. ,  
 1 (5) (6) ,

(6)

(5)

(4)

3.

(5)

(3)

(4)

(3)

(4)

(3)

4.

3

(4)

5.

4

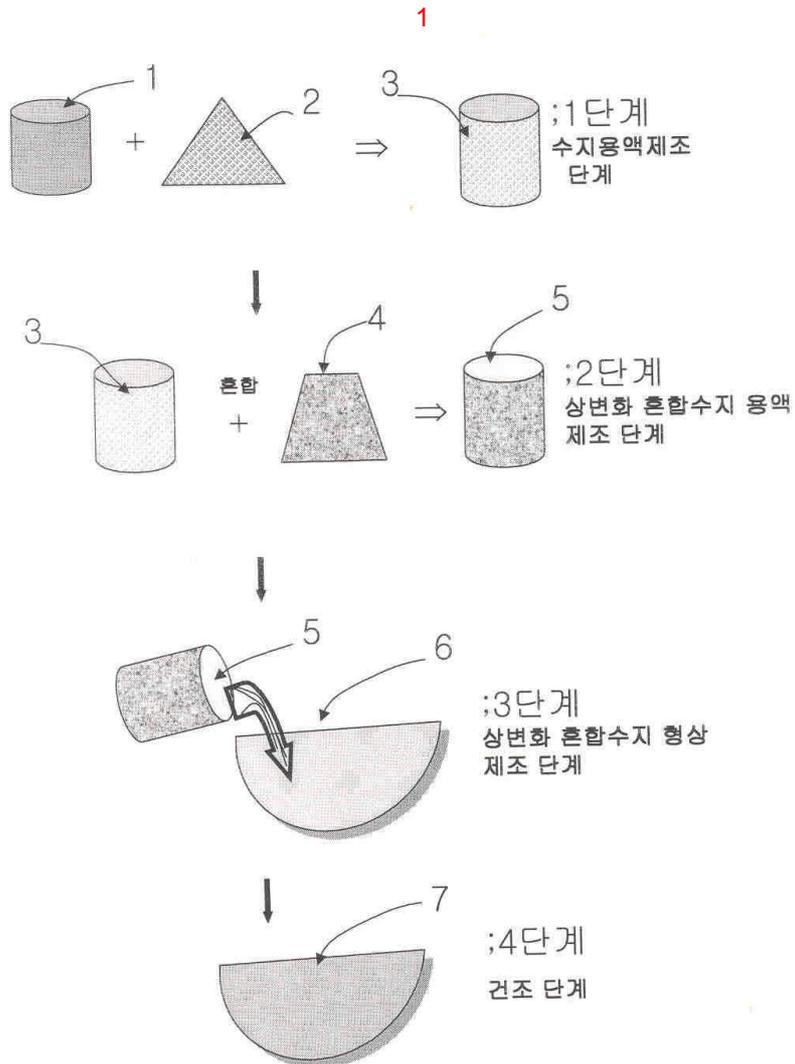
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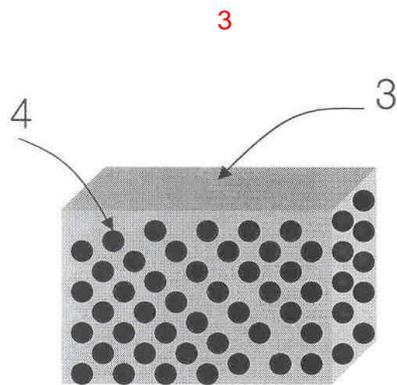
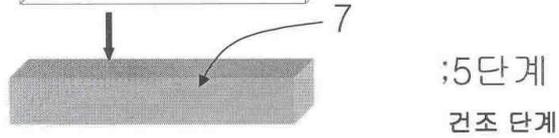
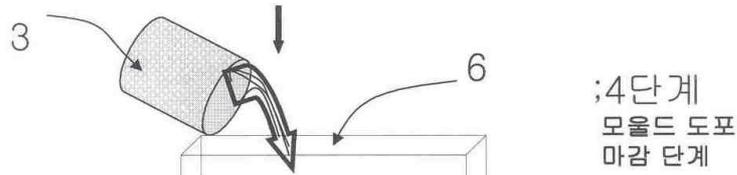
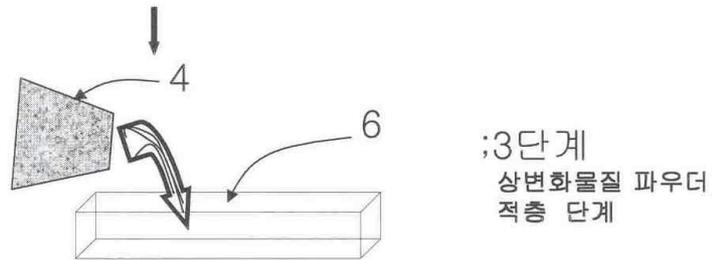
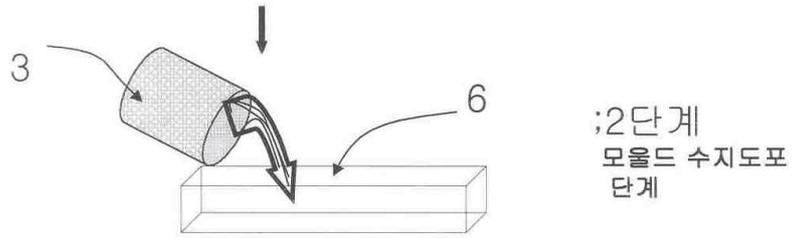
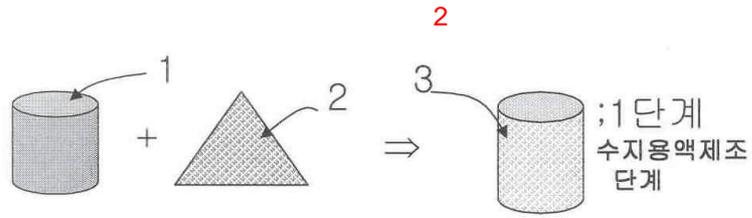
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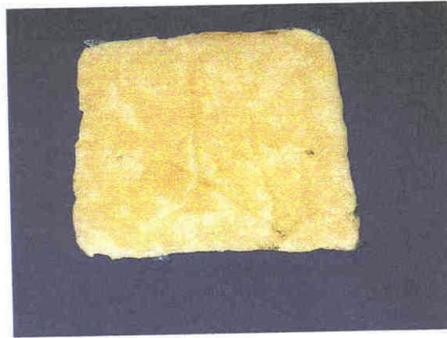
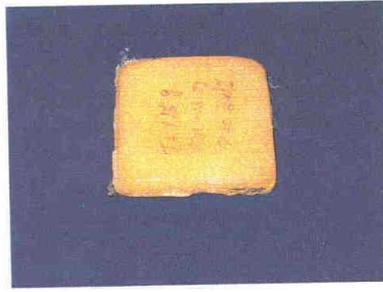
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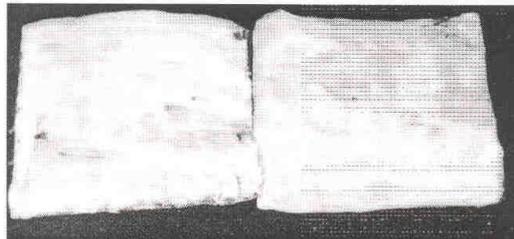




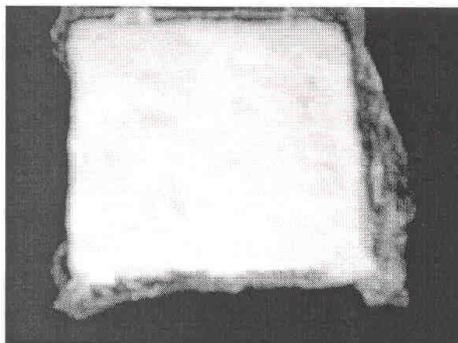
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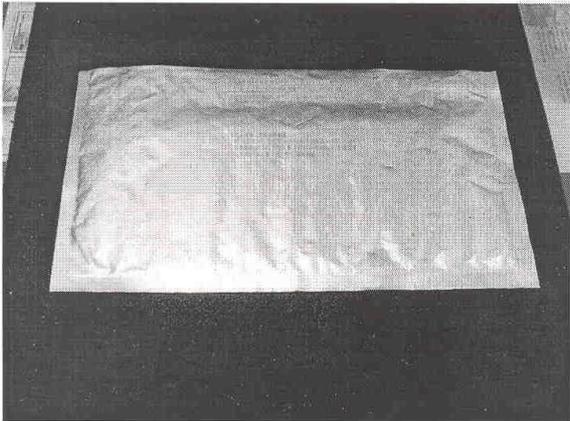
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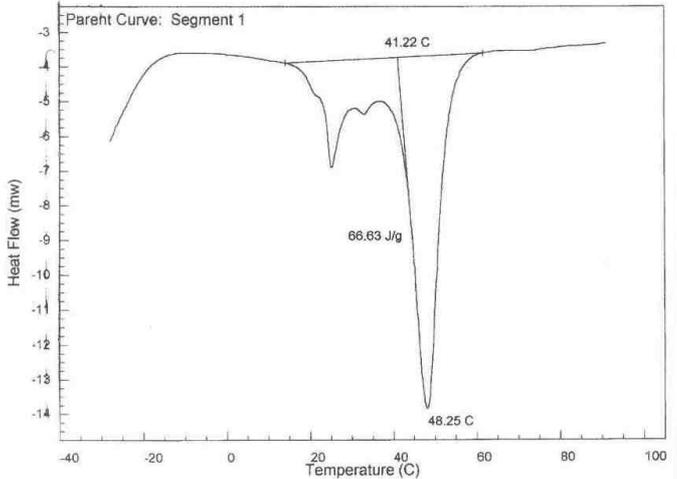
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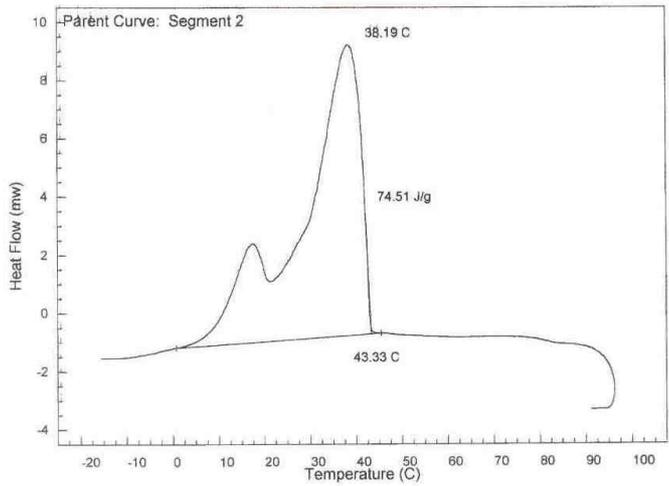
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(a)



(b)