信陽師範大學

16

6

1.

2.

3.

4.

1.1

GB/T 2542-2012

1.
2. 5 g
3. 1 mm
4. 0.5 mm

1. 5
2. 0.2 2 h

   m

3. 0.5 mm

   V m^3 4

1. ρ (1.1)

$$\rho = \frac{m}{V} \tag{0.1}$$

2.

1.2

GB/T 50081-2019 [

]

1.

2. 5 kg 0.1 g

3. 0.5 mm

1. 3

2. 0.1g

m

3.

1

1

1 6 0.5mm 6

V m^3 4

2

2 4 4 4

V m^3 4

1. *ρ* (1.1)

2.

1.3

JGJ52-2006 GB/T

14684-2022

1. 1 L 108 mm 109

mm 2 mm

2. 5 kg 0.1 g

3.

4. 0.5 mm
5.

1. 5.00 mm 4.75 mm
   3L

2. 0.1g m_1
3. (
   50 mm)
   m_2

1. ρ_{os} (1.2)

$$\rho_{os} = \frac{m_2 - m_1}{V_o} \quad (0.2)$$

V_o

2.

1.4

JGJ52-2006 GB/T 14684-2022

1. 500 mL
2. 1 kg 1 g
3.
4.

1. 5.00 mm 4.75 mm
   650 g

2. 300 g m_0

3. 24 h

m_1

4. 2

m_2

1. ρ' (1.3)

$$\rho = \frac{m_0}{m_0 + m_2 - m_1} \times \rho \qquad (0.3)$$

2.

3. 1.3 V_c

(1.4)

$$V_c = \left(1 - \frac{\rho_{os}}{\rho}\right) \times 100\% \qquad (0.4)$$

1.5

JGJ52-2006 GB/T 14685-2022

1. 0.1%
2. 1
3. mm 600mm
4.
5.

1

/mm	/L			
		/mm	/mm	/mm
9.5,16.0,19.0,26.5	10	208	294	2

31.5,37.5	20	294	294	3
53.0,63.0,75.0	30	360	294	4

1. 40 80 120kg

2. 0.1g m_1

3. 50mm

m_2

1. ρ_{os} (1.2)
2.

1.6

JGJ52-2006 GB/T 14685-2022

1. 1000ml
2. 5 kg 1 g
3.
4. 5mm 4.75mm

1. 5mm 2kg

2.

3.

m_1

4.

m_0

5. 2

m_2

1. ρ' (1.3)
2.
3. 1.5 V_c
(1.4)

2.1

GB/T1345-2005

1. m GB/T6005 GB/T6003.1
2. 5 g
3. 100g 0.01g

1. 4000 6000Pa
2. 25.00g m_c

3. 2min

4. m_s g 0.01g

1. 25g m_c 0.0lg
2. 120 40 60°
   0.03g

m_s

1. 0.1%

$$F = \frac{m_s}{m_c} \times 100\% \qquad (0.5)$$

2.2

GB/T1345-2005

1.
2.
3.

1. 500g 120 150ml
2.
3. 120s 15s 120s
4.

1 2s

30s

S 6±1mm

S

P

1.5min

2.3

GB/T1345-2005

9.

24h±15min 48h±30min 72h±45min 7d±2h 28d±8h

15min

10.

11. 50±10N/s

F_f N

12.

2.4±0.2kN/s

F_c N

1.

$$R_f = \frac{1.5F_f L}{2bh^2} \tag{0.6}$$

L L 100mm b h

40mm

±10

2.

$$f_c = \frac{F_c}{A} \tag{0.7}$$

A 40mm×40mm=1600mm^2

±10

±10

1.

2.

3.

4.

3.1

JGJ52-2006 GB/T 14684-2022

1. JGJ52 0.160 0.315 0.630 1.25mm 2.50 5.00 10.00mm GB/T14684 0.150 0.300 0.600 1.18 2.36 4.75 9.50mm GB/T6003.1 GB/T6003.2
2. 1kg 1g
3. 0.5±0.1mm 50±3Hz
4.

1. 10.0 mm(9.5 mm) 4.75 mm( ) ( ) 550g
2. 500 g 10 min 10 min
3. 0.1
4. 200 g

(1 3) h

5 0.08 mm

1. 0.1

2.

0.1

3. 3-1

3-1

mm			
	1	2	3
10.0	0	0	0
5.0	10 0	10 0	10 0
2.5	35 5	25 0	15 0
1.25	65 35	50 10	25 0
0.630	85 71	70 41	40 16
0.315	95 80	92 70	85 55
0.160	100 90	100 90	100 90

4. M_x(0.1)

$$M_x = \frac{A_2 + A_3 + A_4 + A_5 + A_6 - 5A_1}{100 - A_1} \quad (0.8)$$

A_1 A_2……A_6 5.00mm 2.50mm……0.160mm

5.

1

6. (Mx)

5.00mm 0.630mm

5

3.2

JGJ52-2006 GB/T

14684-2022

1. 1kg 1g
2.

1. 20mm

2. 500g m_1 g
m_2(g)

3. m_3(g)

1. 0.1%

$$\omega_{wc} = \frac{m_2 - m_3}{m_3 - m_1} \times 100\% \quad (0.9)$$

2.

3.3

JGJ52-2006 GB/T
14685-2022

1. JGJ52 2.50 5.00 10.0 16.0 20.0 25.0
31.5 40.0 50.0 63.0 80.0 mm GB/T14685 2.36
4.75 9.50 16.0 19.0 26.5 31.5 37.5 53.0 90.0 mm

GB/T6003.1 GB/T6003.2
2.

3. 0.5±0.1mm 50±3Hz

1.

2. 3-2(3-3)

3-2 JGJ52

mm	10	16	20	25	31.5	40	63	80
kg	2	4	4	10	10	15	20	30

3-3 GB/T14685

mm	10	16	20	25	31.5	40	63	80
kg	2	4	4	10	10	15	20	30

3. 10min

1

4. 0.1%

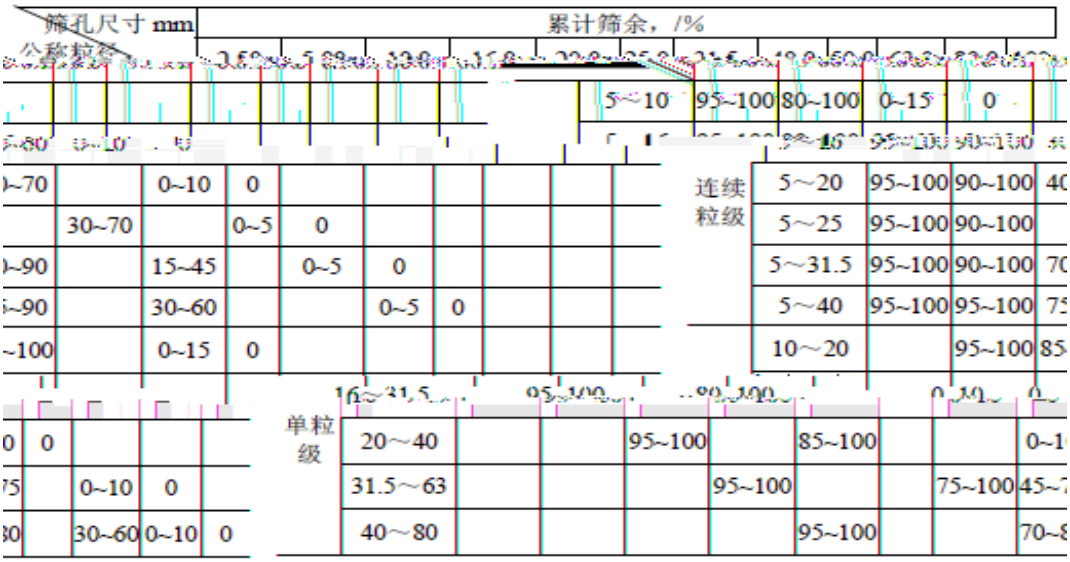
1. 0.1

2.

0.1

3. 3-4

3-4


筛孔尺寸 mm
累计筛余，/%
公称粒径
5～10 95～100 80～100 0～15 0
连续粒级
5～20 95～100 90～100
5～25 95～100 90～100
5～31.5 95～100 90～100
5～40 95～100 95～100
10～20 95～100
单粒级
20～40 95～100 85～100
31.5～63 95～100 75～100
40～80 95～100

4.

10

4.1

GB/T 50080-2016

1. 2. 3.

1. 2.

1

1.

2.

25

1

3.

3~7 s 150 s

1 mm 5 mm

220 mm

50 mm

50 mm

4.

2

40 mm 5~30 s

50 mm

30 s

1.

2.

3.

25

4.

5.

6.

7.

1s

(30~ 21s) (20~1ls) (10~5s)

4.2

GB/T 50080-2016

1. : 40 mm 5 L

40 mm

4

2. : 100 kg 50 g

3. : 50±3 Hz

4. : 16 mm 600mm

1. m_1 10 g

2.

90 mm 90 mm

5 L

25 5L 100 mm,

100 cm^2 12

5~ 10

3.

m_2 10 g

10kg/m^3:

$$\rho_{0c} = \frac{m_2 - m_1}{V} \times 1000$$

ρ_{0c}- (kg/m3);

m_1-- (kg);

m_2-- (kg);

V— (L)

4.3

GB/T 50080-2016

JGJ55-2011 GB 50164-2011

1.

1.

c_0 s_0 g_0 w_0

m_{c0}:m_{s0}:m_{g0}:m_{w0}=1:1.33:3.10:0.48

2.

1.5m×2m

30min

4.1 W/C

5 10

4.4

GB/T 50080-2016

1. 1mm

1mm

100 mm 0.05 mm

±1%

2.

3. C30

0.3~0.5 MPa; C30 C60

0.5~0.8 MPa.

4.

$$f_{cu}=\frac{P}{A}$$

f_{cu}— MPa

P— (N)

A— mm^2

5.1

GB/T 494-2010 JTG E20-2011

1.

2.

3. 200 55 mm 35 mm 200~350
70 mm 45 mm 350
60 mm 125 mL

4. 10 L

5.

6.

7. 0.1s

8. 0.1 mm

9.

10.

11.

1.

2.

3. 10 mm
1~2 h

4.

10 mm

5.

0

6. 5s

0.1 mm

7. 3 10 mm

200

1. 3 3 $y = \lg P, x = T,$

$A_{\lg Pen}$

$$\lg P = K + A_{\lg Pen} \times T$$

lgP—

T—

K—

$A_{\lg Pen}$—

2. PI

$$PI = \frac{20 - 500A_{\lg Pen}}{1 + 50A_{\lg Pen}}$$

5.2

GB/T 494-2010 JTG E20-2011

1.

2.

3.

4.

100 mm 50 mm

5.

6.

1.

2.

3. 30 min 30 min

1~1.5 h

4.

5.

25 mm

6.

7. “cm”

1. 5%

5%

6.1

GB/T 228.1-2010 1

GB/T 42901-2023

1.

2.

3.

1. L_0 L_0=5a 10a 100a a

2.

3.

4.

5.

6.

7.

8.

$L_0/3$

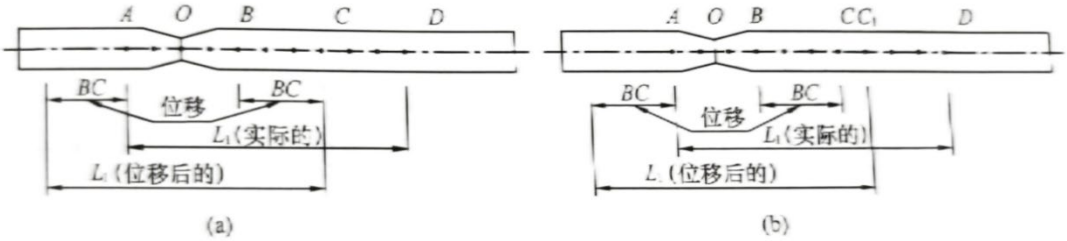
L_1

$L_0/3$

L_1 O B

( ) C ( ) 1

1 C C L_1=AB+2BC L_1=AB+BC+BC



a b

1. δ_s δ_b

$$\delta_s = \frac{F_s}{A}, \delta_b = \frac{F_b}{A}$$

δ_s δ_b—— (MPa)

F_s F_b—— (N)

A—— (mm^2)

δ_s δ_b

1000MPa 10MPa δ_s δ_b 200~1000MPa 5MPa δ_s δ_b

200MPa 1MPa

2. δ_5 δ_{10}

δ_5 (δ_{10}) 1%

δ_5 δ_{10} $= \frac{L_1 - L_0}{L_0} \times 100\%$

:δ_5 δ_{10}— L_0=5a L_0=10a (%)

L_1— (mm)

L_0— (mm)

6.2

GB/T 232-2010

1.

2.

1.

2-11

2-6(a) L_1

$L_1=(d+3a)\pm 0.5a$

d—— (mm)

a—— (mm)

2.

3. (180° 90°)

4.

(180° 90°)

5.

6.

1.

2. 2 mm 0.2 mm

3. 2 mm 5 mm 0.2 mm

4. 5 mm 0.5 mm

5.