

BRUNEL UNIVERSITY  
SCHOOL OF ENGINEERING AND DESIGN  
MECH ENG STRUCTURS LABORATORY

Parkes tests

Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT1  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 04 August 2006

Sample Rate (pts/secs): 10.0000  
 Ramp Rate: 5.0000 mm/min  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min  
 Humidity (%): 45  
 Temperature: 23 C

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** 275.0000 mm  
 Specimen G.L.: 350.0000 mm

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	7.337	19.968	469.844	0.027

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Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT2  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 04 August 2006

Sample Rate (pts/secs): 10.0000 Humidity (%): 40  
 Ramp Rate: 5.0000 mm/min Temperature: 25 C  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** **275.0000 mm**  
 Specimen G.L.: **350.0000 mm**

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	8.011	19.841	466.852	0.029

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Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT3  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 04 August 2006

Sample Rate (pts/secs): 10.0000 Humidity (%): 52  
 Ramp Rate: 5.0000 mm/min Temperature: 26 C  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** 275.0000 mm  
 Specimen G.L.: 350.0000 mm

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	6.936	18.805	442.461	0.025

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Parkes tests

Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT4  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 10 August 2006

Sample Rate (pts/secs): 10.0000  
 Ramp Rate: 5.0000 mm/min  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min  
 Humidity (%): 37  
 Temperature: 23 C

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** 275.0000 mm  
 Specimen G.L.: 350.0000 mm

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	2.184	10.129	238.318	0.008
2	1.063	10.130	238.343	0.004
3	0.962	10.086	237.314	0.003
4	0.978	10.135	238.465	0.004
5	0.887	9.939	233.859	0.003

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Parkes tests

Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT5  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 10 August 2006

Sample Rate (pts/secs): 10.0000  
 Ramp Rate: 5.0000 mm/min  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min  
 Humidity (%): 42  
 Temperature: 24 C

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** 275.0000 mm  
 Specimen G.L.: 350.0000 mm

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	4.769	14.991	352.728	0.017

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Parkes tests

Test Type: Compression  
 Operator Name: KAW  
 Sample Identification: JT6  
 Interface Type: 8500/8800  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.31.00  
 Test Date: 10 August 2006

Sample Rate (pts/secs): 10.0000  
 Ramp Rate: 5.0000 mm/min  
 Ramp Rate 2: 0.0000 mm/min  
 Ramp Rate 3: 0.0000 mm/min  
 Humidity (%): 40  
 Temperature: 25 C

**Full Scale Load Range:** 100.0000 kN

Specimen Geometry: Rectangular  
 Width: 50.0000 mm  
 Thickness: 0.8500 mm  
**Extensometer G.L.:** 275.0000 mm  
 Specimen G.L.: 350.0000 mm

Sample Comments:

JOIST HANGER

	Displcment at Max.Load (mm)	Load at Max.Load (kN)	Stress at Max.Load (Mpa)	Strain at Max.Load (mm/mm)
1	0.810	6.137	144.408	0.003
2	0.547	6.117	143.931	0.002
3	0.518	6.060	142.583	0.002
4	0.500	6.152	144.764	0.002
5	0.503	6.153	144.776	0.002