# SFI TEST REPORT FOR LIGHT ALLOY WHEEL

## Reference No.

<table>
<thead>
<tr>
<th>Reference No.</th>
<th>100918</th>
</tr>
</thead>
</table>

## Type

<table>
<thead>
<tr>
<th>Type</th>
<th>CF5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal designation of rim</td>
<td>20×9.5J</td>
</tr>
</tbody>
</table>

## Offset (mm)

<table>
<thead>
<tr>
<th>Offset (mm)</th>
<th>+42</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.C.D. (mm)</td>
<td>130</td>
</tr>
</tbody>
</table>

## Number of bolt holes

<table>
<thead>
<tr>
<th>Number of bolt holes</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>1-PC</td>
</tr>
</tbody>
</table>

## Material

<table>
<thead>
<tr>
<th>Material</th>
<th>A356-T6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing method</td>
<td>FLOW FORMING</td>
</tr>
</tbody>
</table>

### 1. Tire used for test

<table>
<thead>
<tr>
<th>Item</th>
<th>Nominal designation of tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial load endurance test</td>
<td>285/50R20</td>
</tr>
<tr>
<td>Impact test</td>
<td>245/40R20</td>
</tr>
</tbody>
</table>

### PCD

- $\circ 15.75*24.5$  
- HUB:57.1

MAX LOADING: 1600LBS

## 2. Testing conditions and results

### (1) Rotary bending fatigue test

- Date of test, (Month) 09 (Day) 10 (Year) 2010
- Testing equipment approval number: A-238
- Bending moment during test (kgf.m): 380
- Rotational speed for test: 100,000 circles
- Damage to disk wheel: None
- Loosening of tightening section: OK
- Evaluation: Qualified

*Used in calculation of bending moment [kN][kgf] $r \times 725.76$ (m) $d \times 0.042$ (m)

*Calculated bending moment value $M$ [kNm] $\{kgf\}m$ $r \times 379.12$ (m) $d$ (m)

### (2) Radial load endurance test

- Date of test, (Month) 09 (Day) 12 (Year) 2010
- Testing equipment approval number: B-224
- Pre-test air pressure [kpa][kgf/cm$^2$]: 460
- Radial load during test [kN][kgf]: 1633
- Rotational speed for test: 500,000 circles
- Damage to disk wheel: None
- Loosening of fixture section etc.: OK
- Evaluation: Qualified

*Used in calculation of Radial load[kN][kgf] Calculated Radial load $Q \times 725.76$ [kgf] $W \times 1632.95$ (kgs)

### (3) Impact test 13º

- Date of test, (Month) 09 (Day) 10 (Year) 2010
- Testing equipment approval number: C-297
- Pre-test air pressure [kpa][kgf/cm$^2$]: 200
- Total width (mm): 249
- Weight mass (kg): 616
- Drop height (mm): 230
- Impact position (º): 0º/180º
- Damage to disk wheel: NONE
- Air leakage: OK
- Evaluation: Qualified

### (4) Overall evaluation: Qualified/Disqualified

*Corporate name: Forgestar
*Contact: Wong