Turcite® B Slydway® Technical Data

Coefficient of Friction

- Testing data from testing completed at Corporate R&D

Friction as function of unit load
Lubricated friction - Velocity 2 m/min (6.6 ft/min.)
Materials: Turcite B (Scraped)
Cast iron (Scraped)

Friction as function of velocity
Dry friction - Loading 3.5 Kp/cm² (50 psi)
Materials: Turcite B (Fresh)
Cast iron G.S. 55, 264HB,
(Ra=0.47) (19 CLA)
# Turcite® B Slydway® Technical Data

## Turcite B Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>PSI</td>
<td>ASTM D4894</td>
<td>2000 min</td>
</tr>
<tr>
<td>Tensile Elongation</td>
<td>%</td>
<td>ASTM D4894</td>
<td>170 min</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>-</td>
<td>ASTM D792</td>
<td>3.10</td>
</tr>
<tr>
<td>Hardness</td>
<td>Shore D</td>
<td>ASTM D2240</td>
<td>50-60</td>
</tr>
</tbody>
</table>
Turcite® B Slydway® Technical Data

Peel Strength Comparison between Turcite B Slydway & Rulon 142

Peel Tests on Turcite B Bonded with Waylock II, and Rulon 142 bonded with CE211

Material Strip Pulled at 2"/minute

Turcite B required greater force to be peeled away from the adhesive, than does Rulon 142.

Average Force per inch of bonded material width, required to start tearing material away from the adhesive bond. 95% Confidence Level shown.

Examples of Load-Extension curves for Turcite B and Rulon 142.

Load per inch of width, lb/in

Extension, in

Turcite B
Rulon 142
Turcite® B Slydway® Technical Data

Wear – Comparison between Turcite B Slydway & Rulon 142

Height of Rulon 142 and Turcite B Samples During Lubricated Test
50psi, WayLube Oil

Reciprocating Test but Specimens change Speed and Direction (Velocity) Multiple Times per Cycle

No significant height change observed in either Turcite B or Rulon 142

Height Perspective: 1/2 thickness of a sheet of paper
Turcite® B Slydway® Technical Data

Wear

- Testing data from testing completed at Corporate R&D

![Wear Graph](image1)

- Wear as function of travel
- Lubricated friction - Loading 6 Kp/cm² (85 psi)
- Materials: Turcite B (Scraped)
- Cast iron G 26 (Ra=0.8) (32 CLA)

![Wear Graph](image2)

- Wear as function of travel
- Dry friction - Loading 20 Kp/cm² (284 psi)
- Materials: Turcite B
- Steel C 60 (Rt=3 µ)
- Cast iron (Rt=3 µ)
Turcite® B Slydway® Technical Data

Wear

- Testing data from testing completed at Corporate R&D
- Turcite B Slydway should always be well lubricated during the start-up phase. Very fine particles of the Turcite B Slydway are transferred to the mating surface during the start-up phase.
  - This leads to the slight shading of the metallic mating surface.
  - The start-up phase is concluded with the smoothing phase.
- After the smoothing phase, Turcite B Slydway will experience a low level of both the wear and friction, thus essentially remaining constant.

Mean load of 50 N/cm² with adequate lubrication
Turcite® B Slydway® Technical Data

Coefficient of Friction

In the application, Slydway displays only a slight difference between static and dynamic friction, thus eliminating any presence of stick slip.

Figure shows the range of static friction when using different oils. The values were determined on a scraped Turcite®-B sliding surface with a surface contact pressure of 3.5 N/cm² and a surface roughness of the guide of $R_a = 0.6 \, \mu$m.

Figure shows the least differences at the transition to the hydrodynamic range. With higher surface pressures at up to 200 N/m², the sliding behaviour changes only insignificantly. Good lubrication is of paramount importance in order to achieve a controlled level of dynamic friction.

Range of the coefficient of static friction ($f_o$) as a function of the standstill time when using different lubricants.

Range of the coefficient of dynamic friction ($f$) as a function of the sliding speed when using different lubricants.
Turcite® B Slydway® Technical Data

Coefficient of Friction

- Testing data from testing completed at Corporate R&D