

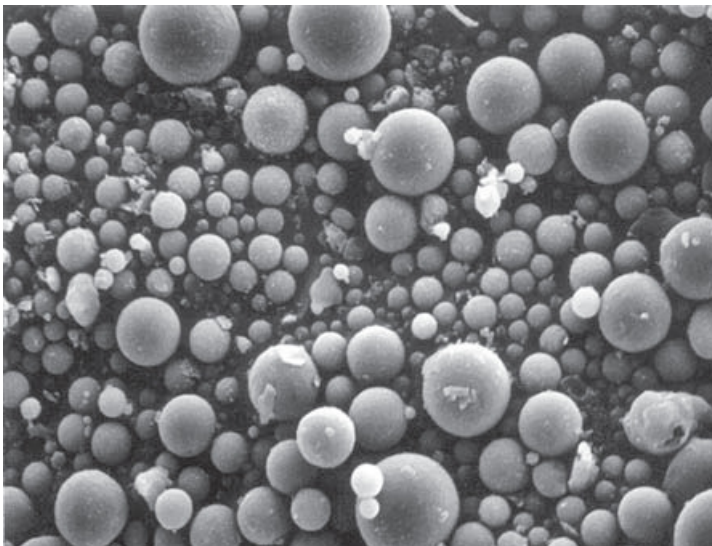
**CalStar Paver Tech Data****CALSTAR PAVER: SUSTAINABLE PAVING**

CalStar® Pavers add great environmental value to projects. CalStar Paver's durability gives it long service life. When laid in open configurations with permeable bases, pavers can reduce runoff, stormwater pollution, and erosion.

Light colors can reduce the heat island effect, helping keep cities and developments cooler.

CalStar's paver is a revolution in paving. Instead of mining virgin clay and firing it, CalStar reclaims fly ash, a byproduct of burning coal, and converts it to a strong, beautiful building material. By using fly ash, CalStar:

- saves production energy
- preserves natural materials
- reduces pollution and landfill space
- reduces carbon emissions
- provides a market for recycling



Fly Ash as seen through SEM

**1. PRODUCT NAME**

CalStar® Paver

**2. MANUFACTURER**

CalStar Products, Inc.

**Headquarters**

CalStar Products, Inc.

6851 Mowry Avenue

Newark, CA 94560

Phone: 510-793-9500

Fax: 510-793-9501

**Technical Center:**

Contact: Gene Guetzow, LEED AP

Phone: 262-877-2369

E-mail: [gguetzow@calstarproducts.com](mailto:gguetzow@calstarproducts.com)

**Factory:**

2825 4 Mile Road

Caledonia, WI 53404

### 3. PRODUCT DESCRIPTION



**Basic Use:** CalStar pavers are used for walkways, plazas, patios and driveways, on flexible, or pervious bases. Whether vintage, traditional or modern, pavers provide a beautiful, durable surface.

**Composition and Materials:** Unlike clay pavers, CalStar's paver is not fired. Its main ingredient is ASTM C 618 Class C fly ash, a self-cementing byproduct of coal combustion. Fly ash, aggregate, mineral oxide pigments, and proprietary ingredients are mixed with water, vibro-compacted, and cured into a stable solid.

**Grades:** Equivalent to ASTM C902 Class SX, and ASTM C936, suitable for pedestrian and light vehicular traffic, in severe climates and freeze-thaw conditions.

**Types:** ASTM C902 Type II, Intermediate Abrasion; ASTM C936

**Sizes:** inches (mm)

4 w, 2 3/8 h, 8 l (98.5 w, 60 h, 198.5 l). Integral spacers for 1/16 (1.5) gaps.

**Colors:** Standard and custom earth-tone colors are available, alone and in blends. Mineral oxide pigments impart permanent, through-body color to each brick that are consistent lot to lot.

**Textures:** Smooth and tumbled.

<p><b>Limitations:</b> Do not use as heavy-duty vehicular paving or where traffic will exceed 251 daily equivalent single loads (ESAL) or 30 miles per hour.</p> <p>Do not use for chemical-resistant brick flooring.</p>
<p><b>4. TECHNICAL DATA</b></p>
<p><b>Relevant Standards:</b></p> <p>ASTM C 902 — Pedestrian and Light Traffic Paving Brick</p> <p>ASTM C936 — Solid Concrete Interlocking Paving Units</p>
<ul style="list-style-type: none"> <li>• <b>Efflorescence:</b> “Not Effloresced” when tested according to ASTM C67.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Strength:</b> Meets or exceeds 8000 psi, on average, when tested in accordance with ASTM C67</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Dimensional Stability:</b> ±1/16”</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Cold Water Absorption:</b> 1.8%</li> </ul>
<p><b>Sustainability:</b></p>
<ul style="list-style-type: none"> <li>• <b>Recycled Material:</b> 40% fly ash by weight. Fly ash, a byproduct of coal combustion, is considered post-industrial (pre-consumer) waste for LEED credits.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Embodied Energy:</b> estimated 1000 BTUs per paver.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>CO<sub>2</sub> Footprint:</b> estimated 0.1 lb of carbon dioxide per 8” Holland paver.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Solar Reflectance:</b> Varies by color. Some colors have an SRI of 29 or greater; contact CalStar for more information.</li> </ul>
<p><b>5. INSTALLATION:</b> Install according to ICPI Tech Spec Number 2.</p>
<p><b>6. AVAILABILITY:</b> CalStar pavers are manufactured in Caledonia, WI and available throughout the U.S.</p>

**7. WARRANTY**

CalStar Products, Inc. (“CalStar”) warrants to the original purchaser and building owner that the Fly Ash Brick (“Brick”) meets the physical performance requirements set forth in ASTM C216 for durability, strength, absorption, saturation, efflorescence, and dimensions, as Type FBX, Grade SW, when manufactured.

**8. MAINTENANCE**

**Regular Maintenance:** CalStar pavers should be maintained according to CalStar Technical Note: [Cleaning Fly Ash Pavers](#), and ICPI recommendations.

**Coatings:** CalStar pavers are compatible with commercially available sealers, though sealers are not required. See CalStar [Technical Note on Sealers](#) for CalStar Pavers.

**9. TECHNICAL SERVICES**

[www.calstarproducts.com](http://www.calstarproducts.com), [info@calstarproducts.com](mailto:info@calstarproducts.com)

**10. OTHER RESOURCES**

- [Guide specification 32 14 16](#)
- [www.GreenFormat.com](http://www.GreenFormat.com)
- [BIM Objects](#)

Additional product information available upon request.

