For dry and wet night driving conditions where clear and safe delineation is important.

“Brighter lines last longer”
(NSW RTA Report No 1841.2)

“Extended road preview time”
(ARRB Record No 1605. Visibility of new centreline and edge line markings)

“Wet night markings improve road safety”
(FHWA)

Durability and enhanced retroreflectivity performance tested in the Australian Capital Territory.
(By: Totalcare Industries for the Department of Urban Services.)
Extract from New South Wales Road & Traffic Authority Report No 1841.2.
Demonstrating that when comparing RTA Class A (small sized) glass beads with RTA Class B (bigger and brighter) glass beads that:

“Brighter Lines Last Longer!”

**Fig. 3 Between wheelpaths, RTA Class A beads**

**Fig. 4 Between wheelpaths, RTA Class B beads**

Bigger & Brighter Beads Last Longer

‘Extended Road Preview Time’

Transportation Research RECORD No 1605.
‘Visibility of New Centreline and Edge Line Pavement Markings’.
(Helmut T Zwahlen and Thomas Schnell)

“It may be more cost effective to increase the materials retroreflectivity and to attempt to improve its performance at shallow viewing angles to obtain longer detection distances.”

“Longer detection distances would be desirable to provide a driver with more preview distance.”

Dry Day Time View

Wet-Night High Beam View

Visibead® 2000 VHR Provides Extended Road Preview, Dry or Wet
‘Wet-Night Markings Improve Road Safety’

HITEC The Highway Innovative Technology Evaluation Centre is a partnership between the American Society of Civil Engineers Civil Engineering Research Foundation (CERF), along with American Association of State Highway, and Transportation Officials (AASHTO), the Transportation Research Board (TRB), and FHWA.

They Report: All-Weather Pavement Markings

“The legislation calls for a program to demonstrate the safety and durability of all-weather pavement markings. Motorists depend on pavement marking cues and highway signs for information on which to base driving decisions. We all know that pavement markings tend to get washed out visually in inclement weather. This program is intended to determine which pavement marking performs best in bad weather.”

Transportation Research RECORD 1657

‘Field Surveys of Pavement-Marking Retroreflectivity’. (James Migletz, Jerry L. Graham, Karin M. Bauer and Douglas W. Harwood)

Reported Minimum Acceptable RL Levels

“For highways with speeds above 80km/hr, a minimum RL value of 150 mcd/lux/m² was recommended. For nighttime wet-pavement conditions, a minimum RL value of 180mcd/lux/m² was recommended”.

(30m geometry)

Visibead® 2000VHR Improve Wet-Night Safety

Durability and Enhanced Retroreflectivity Performance Tested in Australian Capital Territory.

Applications by Totalcare Industries for the A.C.T. Department of Urban Services have provided these results:

Visibead® 2000VHR Pass the Durability & Retroreflectivity Test
Product Information


Application Rates

- A surface application rate of 500-600g/m² is recommended for maximum retroreflectivity and durability.

- An intermix rate, for Thermoplastic, of 30% to 35% minimum by weight is recommended for consistency of maximum retroreflectivity and durability.

Refractive Index

The refractive index (R1) of Visibead® 2000 VHR is in excess of 1.55. (AS/NZS 2009 - 2002 Appendix 1 “Determination of Refractive Index of Glass Beads”) The refractive index is basically a measure of the ability of the glass bead to bend light. The more the light can be bent, the brighter and more focused will be the returned, or retroreflected light.

Spherical Beads

Optimum retroreflection requires true round spheres. Non-round spheres do not reflect light efficiently but scatter in random directions. Strict quality control is necessary to ensure correct amounts of true round spheres.

Visibead® 2000VHR are greater than 80% by mass in true rounds.

Size Range Specification

<table>
<thead>
<tr>
<th>AS Sieve Size (mm)</th>
<th>Percentage Passing AS Sieve (by mass)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>100</td>
</tr>
<tr>
<td>1.4</td>
<td>95-100</td>
</tr>
<tr>
<td>1.18</td>
<td>80-95</td>
</tr>
<tr>
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<td>10-40</td>
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<tr>
<td>0.85</td>
<td>0-5</td>
</tr>
<tr>
<td>0.71</td>
<td>0-2</td>
</tr>
</tbody>
</table>

Information herein is accurate to the best of our knowledge. Suggestions are made without warranty or guarantee of results. Before using, user should determine the suitability of the product for his or her intended use and user assumes the risk and liability in connection therewith. We do not suggest violation of any existing patents or give permission to practice any patented invention without a licence.

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Potters Industries Pty. Ltd.
an affiliate of The PQ Corporation

World leaders in Glass Bead Technology