



## GLASS BEADS

Hi-Brite Glass Beads are APAS certified and are specifically engineered to deliver superior performance on the road. Available in types B, C, D, BHR, CHR and DHR, our glass beads exceed the requirements of APAS0042.

The use of High Reflective (HR) Glass Beads is one of the most economical ways to create safer driving conditions. Only road markings that contain Glass Beads are clearly visible at night and HR beads can significantly enhance the distance of view.

Hi-Brite Glass Beads exceed the APAS0042 requirements for Colour, Roundness and Optical Quality as set out within the current Australian standards and deliver superior durability and retroreflectivity on the road.

Hi-Brite BHR and CHR beads are proven to deliver a minimum of 450mcd/Lux, whilst Hi-Brite DHR beads will deliver a minimum of 600mcd/Lux when used in conjunction with the correct coating and applied at the correct level of film-build.

At RRSP, we have worked closely with the glass bead sources of supply to deliver a quality controlled process of manufacturing to ensure that every glass bead type we offer exceeds the requirements of the current Australian standards. The 3 main criteria on which we work to deliver our superior quality are;

- Optical Quality of our glass beads exceed the requirements of AS / NZ 2009:2006 for opacity, gas inclusion and surface crazing
- Colour of the beads we supply are generally lighter in colour than current standard requirements
- Roundness of the Hi-Brite glass beads is typical >90% which exceeds the current Australian standards

### Key Facts

- APAS Certified
- Manufactured to deliver performance exceeding Australian standards for:
  - Roundness
  - Colour
  - Optical Quality
- High Retroreflectivity reads
- Holistic range of beads that can be used for intermix or drop on applications
- Can be applied with standard road marking equipment
- Compliant to EN 1423, EN 1424 and AASHTO M247 specifications
- Aqua Lux beads comply to EN 1436 and can deliver wet retroreflectivity greater than 300MCD when applied correctly

## Physical Characteristics

- Appearance and Odour: Large particle size white powder, from 100µm to 2mm smooth spheres, with no odour.
- Chemical Formula: Na<sub>2</sub>SiO<sub>3</sub> / Na<sub>2</sub>O / CaO (fused ingredients general formulae, no added heavy metal oxides)
- Melting Point / Boiling Point: MP: >600°C (softens) BP: Not determined
- Decomposition Temperature: Not determined
- Vapour Pressure: Not determined
- Specific Gravity or Density: 2.5 g/cm<sup>3</sup>
- Bulk Density: 500-1000 kg/m<sup>2</sup>. Bulk density does vary with size.
- Solubility: Rate of solubility is dependent on environment. Presences of alkali accelerate dissolution particularly above a pH of 9. pH 7 to 9 (of a 5% slurry when left for several hours - estimated)
- Percent Volatile: <0.5% Octanol/Water
- Flammable Properties: Non-combustible solid.
- Flashpoint: Not applicable
- Flammability Limits: (FL) (%) Not applicable
- Autoignition Temp: Not applicable
- Particle Size: Refer to specific grade

The main category types of Hi-Brite glass beads are:

Hi-Brite Type B & B-HR – These silicon coated, water repellent smaller sized glass beads are typically used for waterborne paint with film builds of approx. 400 micron with a spread rate of 300g. To achieve the optimum retroreflectivity a recommended embedded level of 55% should be achieved. Retroreflectivity levels of up to 450MCD are achievable on the Hi-Brite B type glass bead and levels exceeding this on the B-HR Hi-Brite type glass beads.

Hi-Brite Type C & C-HR - This class of glass bead is a mixed blend of small and large sphere beads and are commonly used with thermoplastics and cold applied plastic road markings

Hi-Brite Type D & D-HR – This large sphered glass bead type is commonly used as a surface coating for high film build products such as cold applied plastics. The Hi-Brite D type range are manufactured with a silane coating to promote adhesion to the binder and are recognised for providing high levels of retroreflectivity. Typically, when applied correctly the Hi-Brite D type bead will achieve 600MCD and greater for the D-HR type bead

Hi-Brite also offer blend mixes to support anti-skid with minimum loss of retroreflectivity

## Recommended Applications

- High-quality drop-on, especially with high requirements for wet-night reflection
- Suitable for all types of pavement marking systems
- Can be applied with standard road marking equipment

## Packaging

- 20kg bags
- 1000kg boxes / sacks

## Storage

- Store at room temperature.
- Store in a dry place.
- Very slippery when spilled, pick up immediately.
- This product is primarily engineered for pavement and/or runway markings, and is not intended for use in humans.

## Support and Service

At RRSP, we look to offer our customers the right road and pavement system solution through a combination of fast service, reliable inventories, knowledgeable people, personalized attention, and competitive pricing which is perceived by our customers to be the best value available. Have a question on this product or any other we offer give us a call

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